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THE BEST OF **OMNI** SCIENCE FICTION NO. 3

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EDITION

FOUR NEW STORIES • SF CLASSIC
NINETEEN MASTERPIECES
FEATURING ORSON SCOTT CARD,
FRITZ LEIBER, ROBERT SHECKLEY
EDITED BY BEN BOVA AND DON MYRUS



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PHOTOGRAPH: TONY GUCCIONE

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HOW PRO WRITERS REALLY WRITE-- OR TRY TO

BY ROBERT SHECKLEY

*In which
a veteran author,
renowned for his ironic humor,
describes to aspiring
SF writers
the tribulations of
the trade*

Like most authors of science-fiction, I was an avid reader first. Back then, as an aspiring writer as well as a fan, I wanted to know how professional writers actually do their job. How do they develop their ideas, plot their stories, overcome their difficulties? Now, twenty-five years later, I know a little about it.

Professional writers are extremely individualistic in the ways they approach their task. If you are among a lucky few, it is relatively simple. You get an idea which in turn suggests a plot and characters. With that much in hand, you go to a typewriter and bash out a story. When it's done, a few hours later, you correct the grammar and spelling. This editing usually results in a messy-looking manuscript, so you type out the whole thing again. For better or worse, your story is now finished.

That's pretty much how I went about it early in my career. If anyone asked, I would explain that plotting a story consists merely of giving your hero a serious problem, a

limited amount of time in which to solve it and dire consequences if he fails to do so. You preclude all easy solutions. The hero tries this and that, but all his efforts serve only to sink him into deeper trouble. Time is soon running out and he still hasn't defeated the villain, rescued the girl or learned the secret of the alien civilization. He's on the verge of utter, tragic defeat. Then, at the last moment, you get him out of trouble. How does this happen? In a flash of insight, your hero solves his problem by some logical means inherent in the situation but overlooked until now. Done properly, your solution makes the reader say, "Of course! Why didn't I think of that?" You then bring the story to a swift conclusion—and that's all there is to it.

This straightforward approach saw me through many stories. Inevitably, however, sophistication set in and I began to experience difficulties. I began to view writing as a problem and to look for ways of dealing with that problem.

I looked to my colleagues and their inci-

PAINTING BY KENT G. BELLOW

vidual methodologies. Lester del Rey, for example, told me that he wrote out his stories in his head—word for word, sentence for sentence—before committing them to paper. Months, even years, would be devoted to this mental composition.

Only when he was ready to type out a story would Lester go to his office, which was about the size of a broom closet, though not so pretty. He had built it in the middle of his living room. After cramming himself inside, Lester would be locked in place by a typewriter that unfolded from a wall onto his lap. Paper, pencils, cigarettes and ashtray were there, and a circulation fan to keep him from suffocating. It was much like being in an upright coffin, but with the disadvantage that he was not dead.

Philip Klass, better known as William Tenn, had many different work methods back in those days. He developed them in order to cope with a blockage as tenacious and enveloping as a love-stricken boa constrictor. Phil and I used to discuss our writing problems at great length. Once we invented a method that would serve two writers. The scheme involved renting a studio and furnishing it with a desk, typewriter and heavy oaken chair. The chair was to be fitted with a chain and padlock. According to our scheme, we would take turns in the studio. When it was, say, Phil's turn to write, I would chain him to the chair, leaving his arms free to type. I would then leave him there, despite his piteous pleas and entreaties, until he had produced a given amount of cogent prose. At that point I would release him and take his place.

We never did carry out our scheme, probably because of the unlikelihood of finding a chair strong enough to restrain a writer determined to escape work. But we did try something else. We agreed to meet at a diner in Greenwich Village at the end of each day's work. There we showed each other the pages we had done. If either of us had failed to fulfill his quota that day, he would pay the other ten dollars.

It seemed foolproof, but we soon ran into a contretemps. Neither of us was willing to let the other actually read his rough, unfinished copy. We got around this by presenting our pages upside down. But this procedure made it impossible to tell if we had really written new copy that day or if we were showing pages from years ago. It became a point of honor for each of us to present new copy that the other could not read. We did this for about a week, then spontaneously and joyously reverted to our former practice of just talking about writing.

As the years passed, my own blockage became wider, deeper and blacker. I thought I knew what my trouble was, however. My trouble was my wife. As soon as I did something about her, I reasoned, everything would be okay. Two divorces later, I knew it was not my wife.

The trouble, I next decided, was New York. How could I possibly work in such a place? What I needed was sunshine, a

sparkling sea, olive trees and solitude. So I moved to the island of Ibiza. There I rented a 300-year-old farmhouse on a hill overlooking the Mediterranean. The house lacked electricity, but it did have four rooms, one of which I could use as my office. First I tried to work in the beautiful, bright rooms upstairs. Alas, I couldn't concentrate on my writing here because I spent too much time admiring the splendid view from the window. So I moved downstairs where there were no such distractions. These two rooms had only one narrow window with bars over it in case of attack by pirates. Formerly a storage place for potatoes, these rooms were dark and dank. There was nothing to divert my attention. But I couldn't work here either. My kerosene lamp gave off too much smoke.

At last I saw what the real trouble was. It stemmed from my working indoors. Henceforth I would toil outdoors, as it was meant to be. So I set up on the beach—only to be frustrated once again, this time by the heat

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of a searing sun and by the ceaseless on-shore breeze blowing sand into my typewriter. I tried composing under a shady tree, but the flies drove me away. When I tried to do my writing in a cafe, the waiters were too noisy.

I gave up on Ibiza and moved to London, firmly convinced now that my problem was a shortage of self-discipline. I began to search in earnest for ways of doing by artifice what once I had done naturally. Here, in no particular order, are a few of the methods I have utilized.

When I am blocked, my tendency is to avoid writing. That's quite predictable. But the less I write, the less I feel capable of writing. A sense of oppression increases as my output dwindles, and I begin to dread writing anything at all. How to break this vicious cycle? The hard truth is that it can only be done by writing. I must practice my craft regularly if I am to maintain any facility at it. I need to produce a flow of words. How am I to achieve that flow when I am blocked?

To solve this dilemma, at one juncture I set myself to type 5,000 words a day. Type, not write. Wordage was my only require-

ment. The substance of what I wrote did not matter. It could be anything, even gibberish, even lists of disconnected words, even my name over and over again. All that mattered was producing daily wordage in quantity.

Perhaps that sounds simple. It was not, I assure you. The first day went well enough. By the second, however, I had exhausted my ready stock of banalities. I found myself creating something like this:

"Ah yes, here we are at last, getting near the bottom of the page. One more sentence, just a few more words... that's it, go, baby, go, do those words... Ah, page done. That's page 19, and now we are at the top of page 20—the last page for the day—or night, since it is now 3:30 in the bloody morning and I have been at this for what feels like a hundred years. But only one page to go, the last, and then I can put aside this insane nonsense and do something else, anything else, anything in the world except this. This, this, this. Damn, still three-quarters of a page to go. Oh words, wherefore art thou words, now that I need you? Come quickly to my fingers and release me of this horror, horror, horror... Oh God, I am losing my mind, mind, mind... But wait, is it possible? Yes, here it is, the end of the page coming up. Oh welcome, kindly end of page, and now I am finished, finished, finished!"

After a few days of this, I realized that I was working very hard and not getting paid for it. Since I was turning out 5,000 words a day anyway, and since I was getting tired of typing meandering long streams of meaningless verbiage, I asked myself why I shouldn't write a story.

And I did just that. I sat down and wrote a story. And it was easy!

Could it be that I had the master key to writing at last? I wrote another story. This one was not so easy, but it was not unduly difficult either. So there I was with two complete stories on paper, and each had taken only a day to wrap up. I thought proudly of these stories for at least a year or so afterwards. I've never employed this technique to get anything else written, but I know it works. Someday, when I'm feeling desperate enough, I'll probably rely on it again. Meanwhile, however, I'm still seeking a less-agonizing method.

Wordage, after all, is not the sole consideration. Writing a story can be a strange and fearsome business. You want so badly to get it exactly right. You try so hard and judge yourself so severely that you may succeed only in confusing yourself. Perhaps you've written many thousands of words and you're sorely dissatisfied with them. It's all chaos, and you can't seem to get on an orderly course. That was my next problem. Wordage, yes, but also an unwillingness, a fear of submitting myself to the tortures of actually turning out a story.

My solution, typically enough, was to sidestep the problem. Since there seemed no way of writing a story without plunging myself into utter despair, I decided I would

not write a story. Instead, I would write a simulation of a story.

My simulations are the same length as a story, and they are made up of narration, dialogue, exposition and all the other elements of a proper story. The difference is that in a proper story the words you choose are vitally important; in a simulation they are of no importance whatever. When I write a simulation, it doesn't matter if my images are trite and my dialogue leaden. It isn't a story, remember, but only something like a story. It's but a formal exercise rather than a piece of careful creation. I never consciously attempt to work into a simulation the beauty, precision, humor and pathos that a proper story must contain.

Using this method has taught me that I have a certain gift for self-deception. Curious to relate, I've discovered that—except for a few rough spots here and there—my simulated stories are very much like the real ones I've written.

What this obviously means is that I can only write as I write, not much better or worse no matter how hard I try. Trying too hard, in fact, has an adverse effect upon my performance. The whole purpose of simulation is to work rapidly, with a certain lightness of touch, as one would do a watercolor rather than an oil painting. This method does work. But there are a couple of obstructive thoughts I have to watch out for. The first is, "Hell, this is going badly; I'd better start again." The other is, "Hey, this is going well; I'd better tighten up and make it really good." Both these judgments are counter-productive.

Thinking, not writing, is sometimes the problem. Various ideas must be regarded from different angles before I can begin writing. Critical decisions must be formulated. Alternatives must be weighed. Bits of data need to be juggled, fit into place, discarded or altered. Such problems are elusive. They refuse to solidify. I make some notes or go for a long walk or discuss it with my wife, but nothing seems to help much. It's all so nebulous and unclear. There are too many things to consider at once, and no means of arranging my data. At times like this, it can be helpful to make a diagram.

Here's the sort of diagram I find useful. You pencil a key word in the center of a sheet of paper and draw a circle around it. Then you draw radiating lines from it and write, as succinctly as possible, the various considerations associated with the idea. The resulting diagram sums up your knowledge on the subject. The entire question and all its ramifications can be taken in at a glance, enabling you to see what you have and, equally important, what you don't have. Hookups between parts of the diagram will suggest themselves. Pertinent areas can be enclosed or connected. Different colors can be used for emphasis. New data can be easily added. Areas of special significance can be removed as the bases of new diagrams or sub-diagrams.

Working with diagrams is fun. At first I made mine with an ordinary fountain pen. Then I switched to colored Pentels. For greater efficiency, I worked out a set of color-coded symbols, which was well worth the time it took. I also experimented with different modes of lettering to improve clarity.

My diagrams grew larger and more complex, whereupon I switched to larger sheets of paper. After that I got into colored inks. The commercial brands weren't quite right, so I began to mix my own. But the system still lacked something. It was becoming too mechanical and lackluster. So I began to illustrate my diagrams, first with little sketches, then with line and wash drawings, and finally with watercolors. My skill as an illustrator left something to be desired, so I began looking around for a good art course. Unfortunately, I had to drop the whole thing and get some salable writing done. Still, it was not a total waste. When a market opens up for fancy dia-

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grams, I'll be all set.

My trials and tribulations have brought me to one firm conclusion—namely, that confusion and anxiety will never be altogether eliminated from the process of creative writing. Ideas frequently have to incubate in an author's subconscious until something clicks into place. Often, at least in my case, this gestation period is allowed to persist too long, which serves as a detriment to the later stages of the work. You reach a stage where the idea should be hatched, but something is still amiss and you don't know what it is. It sits there, a soggy dark mass in your mind, a subtle unpleasantness that will not permit you to continue. What to do then?

There is an extraordinarily direct method that I've devised to answer this very problem. A psychologist would probably describe it as a catharsis. A typical session finds me talking to myself aloud, asking and answering questions.

"Well, Bob, what exactly is wrong?"

"The story stinks, that's what's wrong."

"But how, precisely, does it stink?"

"It moves too slowly, for one thing."

"So how could you speed it up?"

"I don't know."

"Of course you know, Bob. Name a way in which you could speed it up."

"Well, I suppose I could delete the two-thousand-word description of a sunset on Mars."

"Would that solve the problem?"

"No. My characters stink, too."

"In what way?"

"They just sit around wishing they were somewhere else."

"What could you do about that?"

"Give them something to do, I guess."

"Like what?"

"I don't know... Wait, I've got it! They can look for an alien civilization!"

This method works well, but it does demand a certain degree of concentration. That's the only tough part about it. Occasionally I can't even get my questions into focus, let alone the answers. At such times my solo dialogue is apt to go like this:

"Well, Bob, how's the lad?"

"I'm fine, thanks. How about you?"

"Oh, I'm fine."

"That's nice."

"Yes, it is, isn't it?"

"Yes."

"Was there some problem you wanted to discuss with me?"

"Problem? Oh, yes. It's this story."

"What story?"

"The one I've been trying to write for the last three months."

"Oh, that story."

"Yes."

"You mean the story with the two-thousand-word description of a Martian sunset?"

"That's the one."

"Have you got any ideas?"

"About what?"

"About the story, Bob. How can I fix it?"

"Well, you could always expand the description of that sunset..."

And so it goes—you win some and you lose some. ∞

This article was adapted from a speech Bob Sheckley gave before an enthusiastic audience of science-fiction fans. Many of whom aspired to be professional writers. What Bob didn't tell them then, as he was making the speech, was that devilishly he had devised a perfect way not to write too often or too much. He had taken a day job as fiction editor of Omni magazine.

After about a year and a half, however, the call to true duty became too much for even the shirking Sheckley. He left New York City for Miami Beach, giving up his job in charge of fiction to accept the less demanding role of Contributing Editor, thereby returning to his typewriter full-time and, as he puts it, to a life of "free-lance novelizing and unstructured poverty." The result will no doubt be additions to an oeuvre totalling some half-dozen novels (e.g. The Tenth Victim) and hundreds of stories, published in just about every relevant magazine from Imagination Science Fiction to Galaxy to Omni itself.—D.M.

RENT CONTROL

Lovers dream of making time stand still; so they learned how to stop the clock

BY WALTER TEVIS

My God," Edith said, "that was the most *real* experience of my life." She put her arms around him, put her cheek against his bare chest, and pulled him tightly to her. She was crying.

He was crying, too. "Me, too, darling," he said, and he held his arms around her. They were in the loft bed of her studio apartment on the East Side. They had just had orgasms together. Now they were sweaty, relaxed, blissful. It had been a perfect day.

Their orgasms had been foreshadowed by their therapy. That evening, after supper, they had gone to Harry's group as always on Wednesdays, and somehow everything had focused for them. He had at last shouted the heartfelt anger he bore against his incompetent parents; she had screamed her hatred of her sadistic mother, her gutless father. And their relief had come together there on the floor of a New York psychiatrist's office. After the screaming and pounding of fists, after the real and potent old rage in both of them was spent, their smiles at each other were radiant. They went afterwards to her apartment, where they had lived together half a year, climbed up the ladder into her bed, and began to make love slowly, carefully. Then frenetically. They were picked up bodily by it and carried to a place where they had never been before.

Now, afterwards, they were settling down in that place, huddled together. They lay silently for a long time. Idly she looked toward the ledge next to the mattress, where she kept cigarettes, a mason jar with miniature roses, a Japanese ashtray, and an alarm clock.

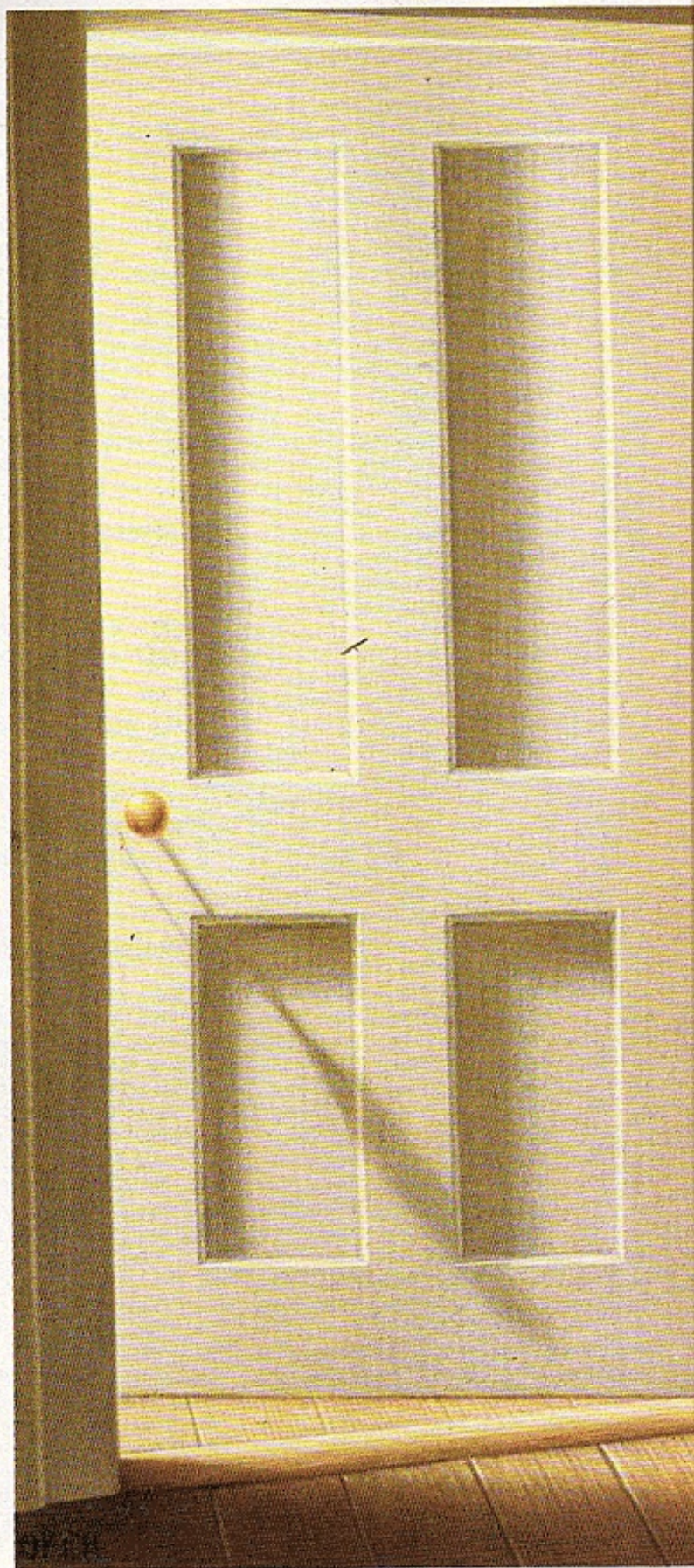
"The clock must have stopped," she said.

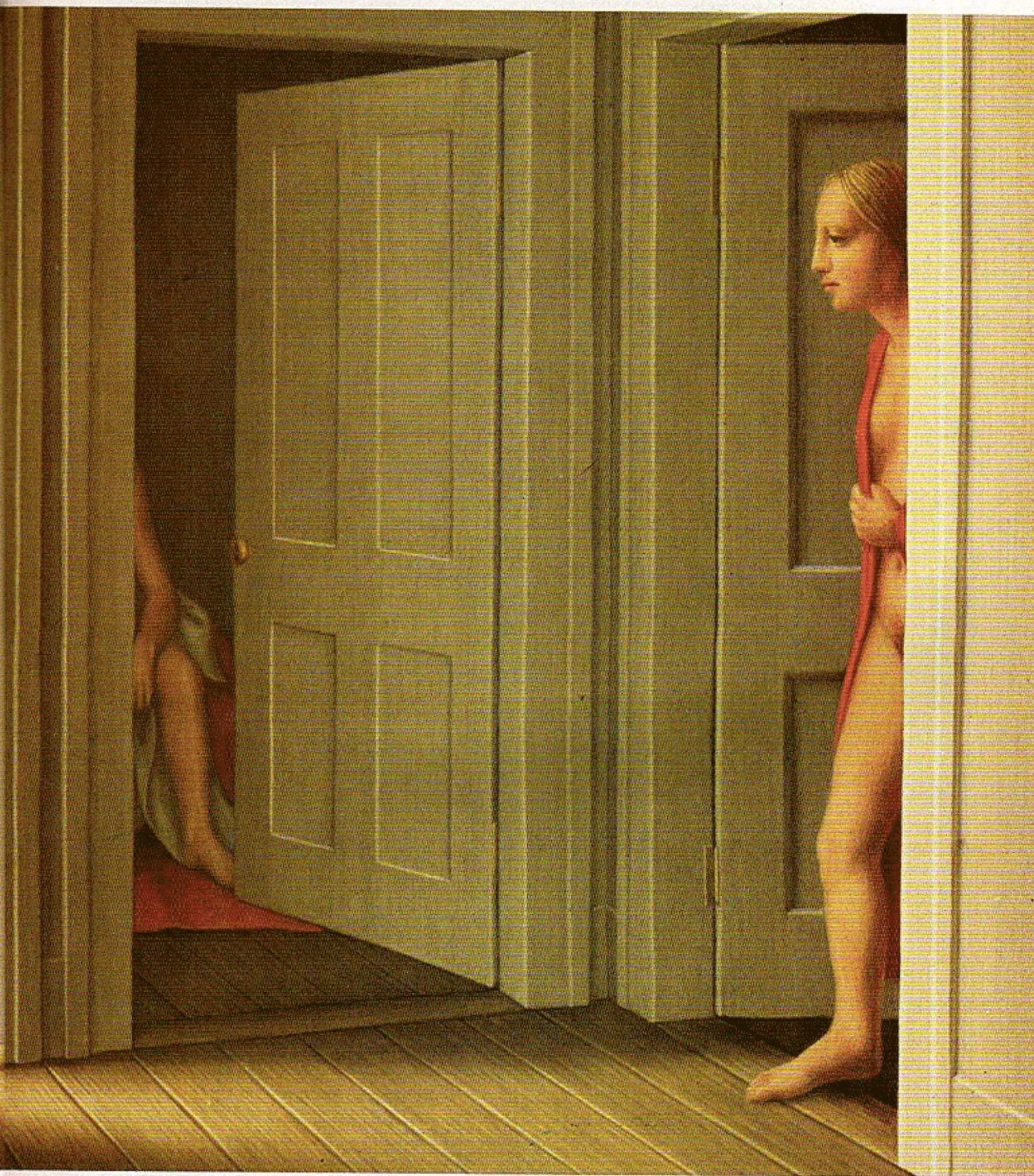
He mumbled something inarticulate. His eyes were closed.

"It says nine-twenty," she said, "and we left Harry's at nine."

"Hmmm," he said, without interest.

PAINTING BY GEORGE TOOKER





She was silent for a while, musing. Then she said, "Terry, what time does your watch say?"

"Time time," he said. "Watch watch." He shifted his arm and looked. "Nine-twenty," he said.

"Is the second hand moving?" she asked. His watch was an Accutron, not given to being wrong or stopping.

He looked again. "Nope. Not moving." He let his hand fall on her naked behind, now cool to his touch. Then he said, "That is funny. Both stopping at once." He leaned over her body toward the window, pried open a space in her Levolor blinds, and looked out. It was dark outside, with an odd shimmer to the air. Nothing was moving. There was a pile of plastic garbage bags on the sidewalk opposite. "It can't be eleven yet. They haven't taken the garbage from the Toreador." The Toreador was a Spanish restaurant across the street; they kept promising they would eat there sometime but never did.

"It's probably about ten-thirty," she said. "Why don't you make us an omelet and turn the TV on? Make mine with cheddar. And three eggs."

"Sure, honey," he said. He slipped on his bikini briefs and eased himself down the ladder. Barefoot, he went to the tiny Sony near the fireplace, turned it on, and padded over to the stove and sink at the other end of the room. He heard the TV come on as he located the omelet pan, which he had bought her, under the sink, nestling between the Bon Ami and the Windex. He got eggs out, cracked one, looked at his watch. It was running. It said nine-twenty-six. "Hey, honey," he called out. "My watch is running."

After a pause she said, her voice slightly hushed, "So is the clock up here."

He shrugged and put butter in the pan and finished cracking the eggs, throwing the shells into the sink. He whipped the eggs with a fork, then turned on the fire under the pan and walked back to the Sony for a moment. A voice was saying, "... nine-thirty." He looked at his watch. Nine-thirty. "Jesus Christ!" he exclaimed.

They were both thirty-five years old, both youthful, good-looking, smart. They were both Pisces, with birthdays three days apart. Both had good complexions, healthy dark hair, clear eyes. They both bought clothes at Bergdorf Goodman and Saks and Bloomingdale's; they both read the *Sunday Times*, spoke fair French, and watched *Nova*, and each had read *The Stories of John Cheever*. He was a magazine illustrator, she a lawyer; they could have afforded a bigger place, but her studio was rent-controlled and had a terrific Midtown address. It was too much of a bargain to give up. "Nobody ever leaves a rent-controlled apartment," she told him. So they lived in one and a half rooms together, and money piled up in their bank accounts.

They were terribly nervous lovers at first, too unsure of everything to enjoy it, full of

explanations and self-recriminations. He had trouble staying hard; she would not lubricate and could excite herself only with his hands on her. She was afraid of him and made love dutifully, often with resentment. He was embarrassed by his unreliable member, sensed her withdrawal from his ardor, was afraid to tell her so. Often they were miserable.

But she had the good sense to take him to her therapist, and he had the good sense to go. Finally, after six months of private sessions and of group, it had worked. They had had the perfect orgasm, the perfect release from tension, the perfect intimacy.

Now they ate their omelets in bed from Spode plates, using his mother's silver forks. Sea salt and Java pepper. Their legs were entwined as they ate.

They lay silent for a while afterwards. He looked out the window. The garbage was still there; there was no movement in the street; no one was on the sidewalk. There was a flatness to the way the light shone on the buildings across from them, as if they were painted—some kind of a backdrop.

He looked at his watch. It said nine-forty-one. The second hand wasn't moving. "Shit!" he said, puzzled.

"What's that, honey?" Edith said. "Did I do something wrong?"

"No, sweetie," he said. "You're the best thing that ever happened. I'm crazy about you." He patted her ass with one hand and gave her his empty plate with the other.

She set the two plates on the ledge, which was barely wide enough for them. She glanced at the clock. "Jesus," she said, "that sure is strange..."

"Let's go to sleep," he said. "I'll explain the theory of relativity in the morning."

But when he woke up, it wasn't morning. He felt refreshed, thoroughly rested; he had the sense of a long and absolutely silent sleep, with no noises intruding from the world outside, no dreams, no complications. He had never felt better.

When he looked out the window, the light from the streetlamp was the same and the garbage bags were still piled in front of the Toreador and—he saw now—what appeared to be the same taxi stood motionless in front of the same green station wagon in the middle of Fifty-first Street. He looked at his watch. It said nine-forty-one.

Edith was still asleep, on her belly, with one arm across his waist, her hip against his. Not waking her, he pulled away and started to climb down from the bed. On an impulse he looked again at his watch. It was nine-forty-one still, but now the second hand was moving.

He reached out and turned the electric clock on the ledge to where he could see its face. It said nine-forty-one also, and when he held it to his ear, he could hear its gears turning quietly inside. His heart began to beat stronger, and he found himself catching his breath.

He looked at his watch. It said ten o'clock. He looked out the window; it was

dark—evening. There was no way it could be ten in the morning. But he knew he had slept a whole night. He knew it. His hand holding the second cigarette was trembling.

Slowly and carefully he put out his cigarette, then climbed back up the ladder to the loft bed. Edith was still asleep. Somehow he knew what to do. He laid his hand on her leg and looked at his watch. As he touched her the second hand stopped. For a long moment he did not breathe.

Still holding her leg, he looked out the window. This time there was a group of people outside; they had just left the restaurant. None of them moved. The taxi had gone and with it the station wagon, but the garbage was still there. One of the people from the Toreador was in the process of putting on his raincoat. One arm was in a sleeve and the other wasn't. There was a frown on his face visible from the third-story apartment where Terry lay looking at him. Everything was frozen. The light was peculiar, unreal. The man's frown did not change.

Terry let go of Edith, and the man finished putting on his coat. Two cars drove by in the street. The light became normal.

Terry touched Edith again, this time laying his hand gently on her bare back. Outside the window everything stopped, as when a switch is thrown on a projector to arrest the movement. Terry let out his breath audibly. Then he said, "Wake up, Edith. I've got something to show you."

They never understood it, and they told nobody. It was relativity, they decided. They had found, indeed, a perfect place together, where subjective time raced and the external world stood entirely still.

It did not work anywhere but in her loft bed—and only when they touched. They could stay together there for hours or days, although there was no way they could tell how long the "time" had really been; they could make love, sleep, read, talk, and no time passed whatever.

They discovered, after a while, that only if they quarreled did it fail, and then the clock and watch would run even though they were touching. It required intimacy, even of a slight kind—the intimacy of casual touching—for it to work.

They adapted their lives to it quickly, and at first it extended their sense of life's possibilities enormously. It bathed them in a perfection of the lovers' sense of being apart from the rest of the world and better than it.

Their careers improved; they had more time for work and for play than anyone else had. If one of them was ever under serious pressure—of job competition, of the need to make a quick decision—one could get the other in bed and they would have all the time necessary to decide, to think up the speech, to plan the magazine cover, or to review the details of the case going to trial.

Sometimes they took what they called Weekends, buying and cooking enough food for five or six meals, and just staying in

the loft bed, touching, while reading or meditating or making love or working. He had his art supplies in shelves over the bed now, and she had reference books and note pads on the ledge. He had put mirrors on two of the walls and on the ceiling, partly for sex, partly to make the small place seem bigger, less confining.

The food was always hot, unspoiled; no time had passed for it between their meals. They could not watch television or listen to records while in suspended time; no machinery worked while they touched.

Sometimes for fun they would watch people out the window and stop and start them up again comically, but that soon grew tiresome.

They both got richer and richer, earning promotions and higher pay, and the low rent helped them to save plenty of money. Of course there was now truly no question of leaving the apartment; there was no other bed in which they could stop time—no other place.

For about a year they would always stay later at parties than anyone else; they would taunt acquaintances and colleagues when they were too tired to accompany them to all-night places for scrambled eggs or a final drink. Sometimes they annoyed colleagues by showing up bright-eyed and rested in the morning, no matter how late the party had gone on, no matter how many drinks had been drunk, no matter how loud and fatiguing the revelry. They were always buoyant, healthy, awake, and just a bit smug.

But after the first year they tired of partying, grew bored with friends, and went out less often. Somehow they had come to a place that they were never bored with, and Edith referred to it as "our little loft bed." The center of their lives had become a king-sized foam mattress with a foot-wide ledge and a few inches of head and foot room at each end. They were never bored when in that small space.

What they had to learn was not to quarrel, not to lose the modicum of intimacy that their relativity phenomenon required. But that came easily, too; without discussing it, each learned to give only a small part of self to intimacy with the other, to cultivate a state of mind that was distant, remote enough to be safe from conflict, yet with a controlled closeness. They practiced yoga for body and spirit and Transcendental Meditation. They never told each other their mantra. Often they found themselves staring at different mirrors. Now they seldom looked out the window.

It was Edith who made the second major discovery. One day when Terry was in the bathroom shaving, and his watch was running, he heard her shout to him, in a kind of cool playfulness, "Quit dawdling in there, Terry. I'm getting older for nothing." There was some kind of urgency in her voice, and he caught it. He rinsed his face off in a hurry, dried, and walked to the bedroom. "What do you mean?" he asked.

She didn't look at him. "Get on up here, Dum-dum," she said, still in that controlled, playful voice. "I want you to touch me."

He climbed up and laid a hand on her shoulder. Outside the window a walking man froze in mid-stride and the sunlight darkened as if a shutter had been placed over it.

"What do you mean, 'older for nothing'?" he asked.

She looked at him thoughtfully. "It's been about five years now, in the real world," she replied. The "real world" for them meant the time lived by other people. "But we must have spent five years in suspended time here in bed. More than that. And we haven't been aged by it."

He looked at her. "How could . . . ?" "I don't know," she said. "But I know we're not any older than anybody else."

He turned toward the mirror at her feet and stared at himself in it. He was still youthful, firm, clear-complexioned. Suddenly he smiled, at himself. "Maybe I can

Each was obsessed with one
single notion:
immortality. They could live
forever in the loft
bed. Deep in themselves
they became
a pharaoh's dream of time
without end.

fix it so I can shave in bed."

Their Weekends became longer. Although they could not measure their special time, the number of times they slept and the times they made love could be counted; both those numbers increased once they realized the time in bed together was "free"—that they did not age while touching in the loft bed, while the world outside was motionless and the sun neither rose nor set.

Sometimes they would pick a time of day and a quality of light they both liked, and they'd stop their time there: at twilight, with empty streets and a soft ambience of light. They would allow for the slight darkening effect, and then they'd touch and stay touching for eight or ten sleeping periods, six or eight orgasms, fifteen meals.

The world outside became less interesting for them. They both had large bank accounts, and both had high-level yet undemanding jobs; her legal briefs were prepared by assistants; three young men in his studio made the illustrations that he designed, on drawing pads, in the loft bed. Often the nights were a terrible bore, and they had to let go of each other if they

wanted morning to come—just so they could go to work, a change of pace.

But less and less did either of them want the pace to change. Each had learned to spend "hours" motionless, staring at a mirror or out of the window, preserving his or her youth against the ravages of real time and real movement. Each became obsessed, without sharing the obsession, with a single idea: immortality. They could live forever, young and healthy and fully awake, in this loft bed. There was no question of interestingness or of boredom; they had moved, deeply in their separate souls, far beyond that distinction, that rhythm of life. Deep in themselves they had become a pharaoh's dream of endless time; they had found the pyramid that kept the flow of the world away.

One autumn morning that had been like two weeks for them he looked at her, after waking, and said, "I don't want to leave this place. I don't want to get old."

She looked at him before she spoke. Then she said, "There's nothing I want to do outside."

He looked away from her, smiling. "We'll need a lot of food," he said.

They had already had the apartment filled with shelves, and a bathroom was installed beneath the bed. Using the bathroom was the only concession to real time; to make the water flow, it was necessary for them not to touch.

They filled the shelves that autumn afternoon with hundreds of pounds of food—cheeses and hot chickens and sausages and milk and butter and big loaves of bread and precooked steaks and pork chops and hams and bowls of cooked vegetables, all prepared and delivered by a wondering caterer and five assistants. They had cases of wine and beer and cigarettes. It was like an efficient, miniature warehouse.

When they got into bed and touched, she said, "What if we quarrel? The food will all spoil."

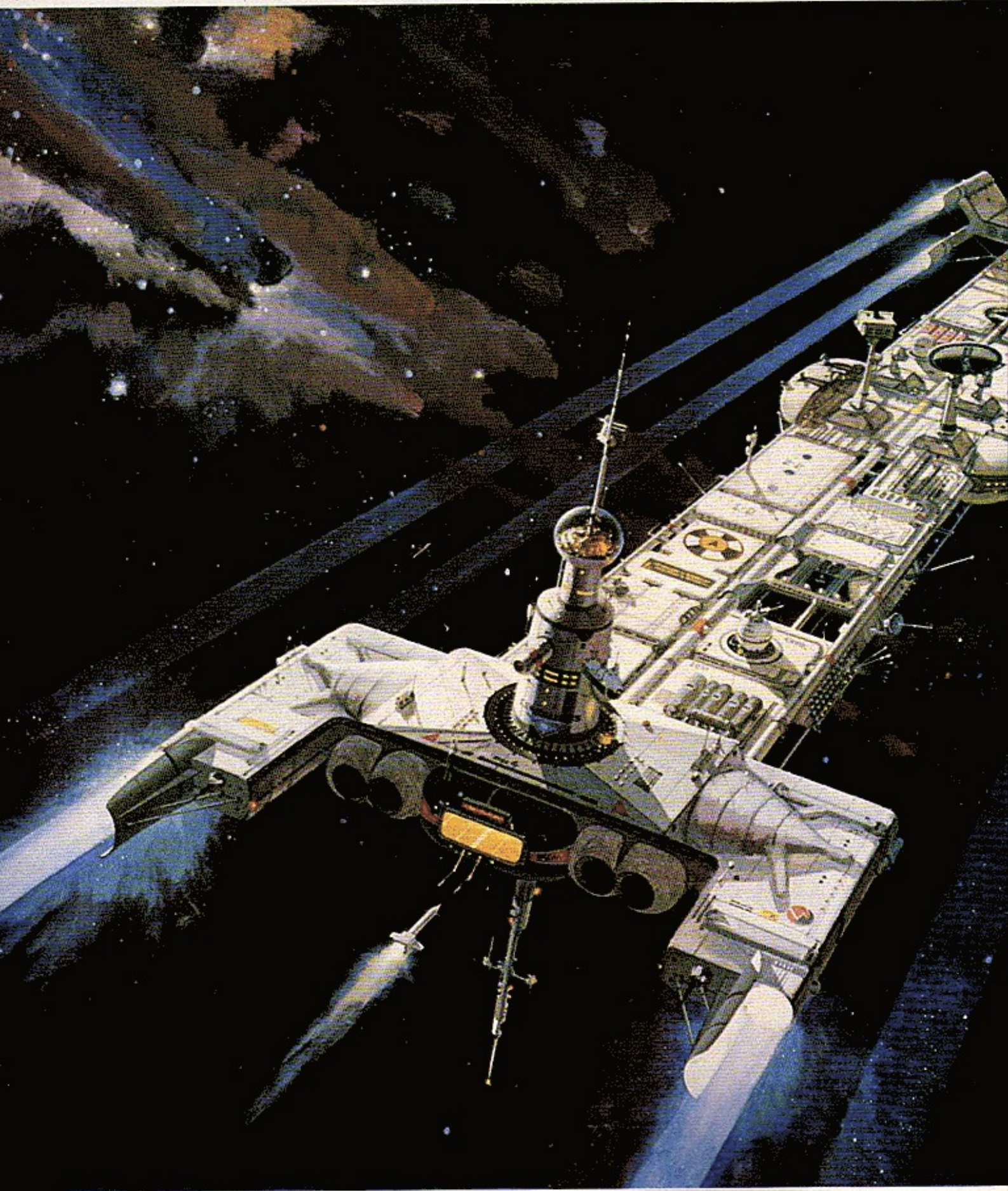
"I know," he said. Taking a deep breath, he added, "What if we just don't talk?"

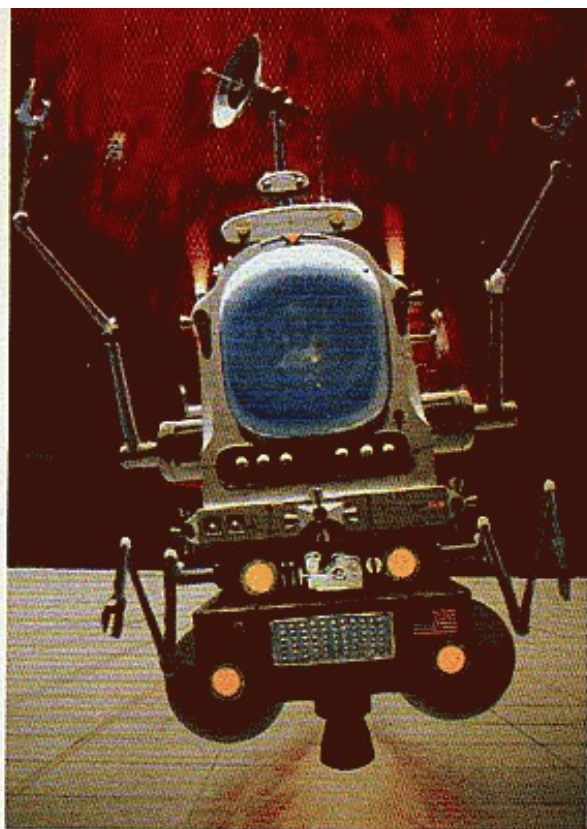
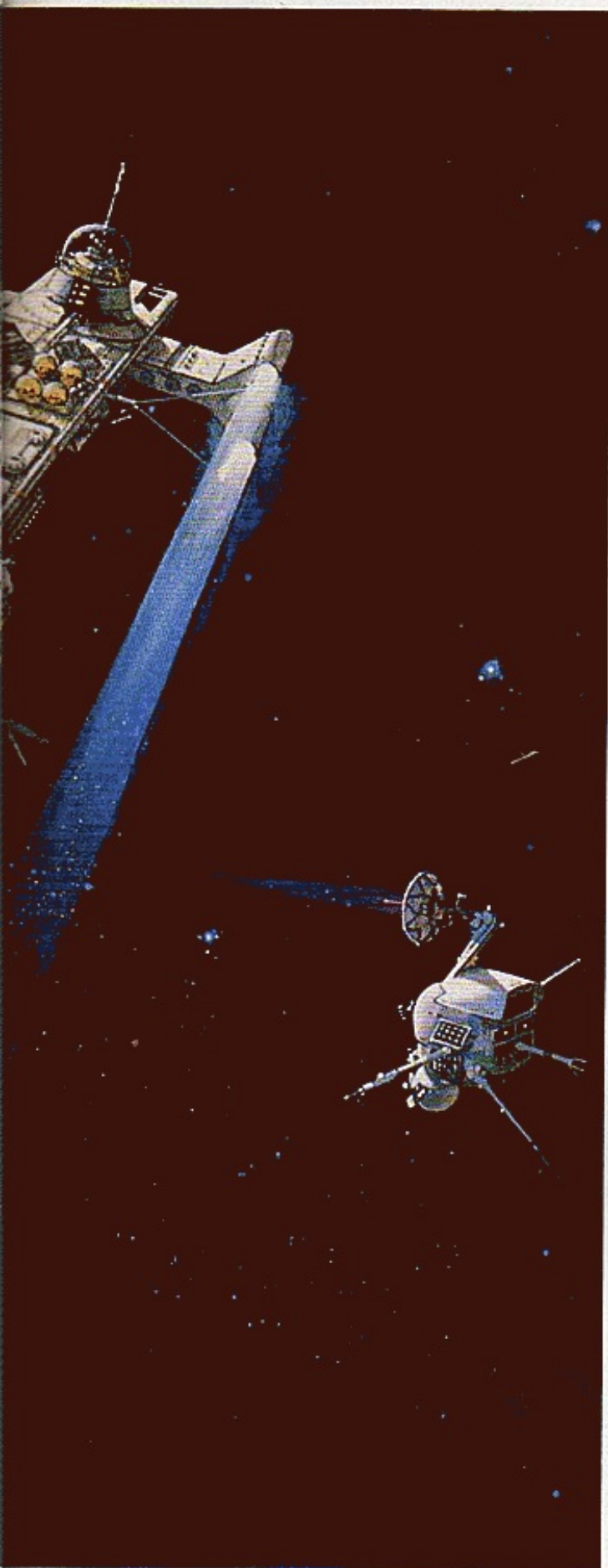
She looked at him for a long time. Then she said, "I've been thinking that, too."

So they stopped talking, and they turned toward their own mirror and thought of living forever, back to back, touching.

No friend found them, for they had no friends. But when the landlord came in through the empty shelves on what was for him the next day, he found them in the loft bed, back to back, each staring into a different mirror. They were perfectly beautiful, with healthy, clear complexions, youthful figures, dark and glistening hair. But they had no minds at all. They were not even like beautiful children; there was nothing there but prettiness.

The landlord was shocked at what he saw. But he recognized soon afterwards that they would be sent somewhere and that he would be able to charge a profitable rent, at last, from someone new. 





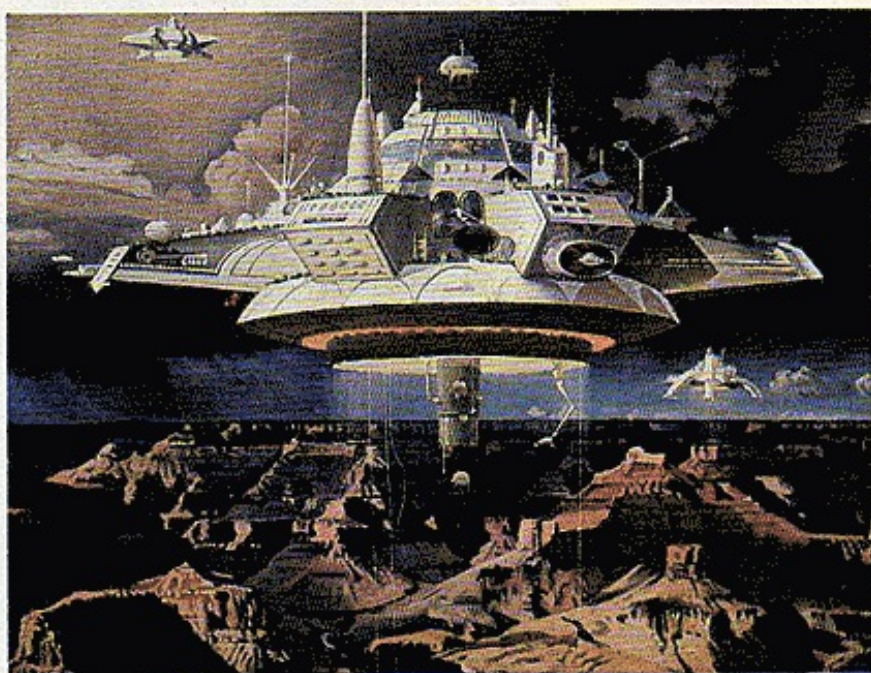
SPACE WITNESS

*If anyone paints
in space, it should be Bob McCall:
He's all packed*

Artist in residence—in space? Why not. Eventually an artist will record the wonders of space firsthand while spending a week in orbit aboard the space shuttle. Prime candidate for this honor is space artist Robert T. McCall.

More people have bought more reproductions of McCall's work than of any other space artist's. Usually the owner turns it over, licks it, and mails it to someone else. Six U.S. commemorative postage stamps issued in the past ten years bear McCall reproductions, among them *Skylab*, *Apollo/Soyuz*, the *Pioneer* flight to Jupiter, and the *Viking* missions to Mars. His *Decade of Achievement* double stamp was hand-canceled on the moon by astronaut David Scott during the *Apollo 15* mission. McCall is working on another stamp right now.

The heroic mural McCall designed for the National Air and Space Museum, in Washington, D.C., has been seen by 40 million visitors. Two other large murals were completed by the artist at NASA centers in California and Texas. McCall helped interpret the beginnings of the Space Age for *Life* magazine by rendering dozens



of on-the-spot paintings from his vantage point at Cape Canaveral, Florida, and later became a key contributor to the NASA art program. He created the promotional art for Stanley Kubrick's *2001: A Space Odyssey* and submitted futuristic concepts for such films as *Star Trek* and *Meteor* and for Walt Disney studios.

McCall wants to go into orbit. Broad-shouldered and now sixty, he keeps fit and exercises purposefully so that he can accept the NASA invitation if and when it comes. Comfortably dressed for work in a faded jump suit splashed with vivid daubs of paint, he asserts, "Of course I want to go. I want to see how the view and perspective change when you're not standing on Earth ... and to experience

Preceding page: Concept of spaceship for Black Hole; one-man space robot. Above: Metropolis 4000; Disney studios' giant space station. Right: Astronaut firing maneuvering unit.

“I’d like to communicate the sense of what it’s like up there.”





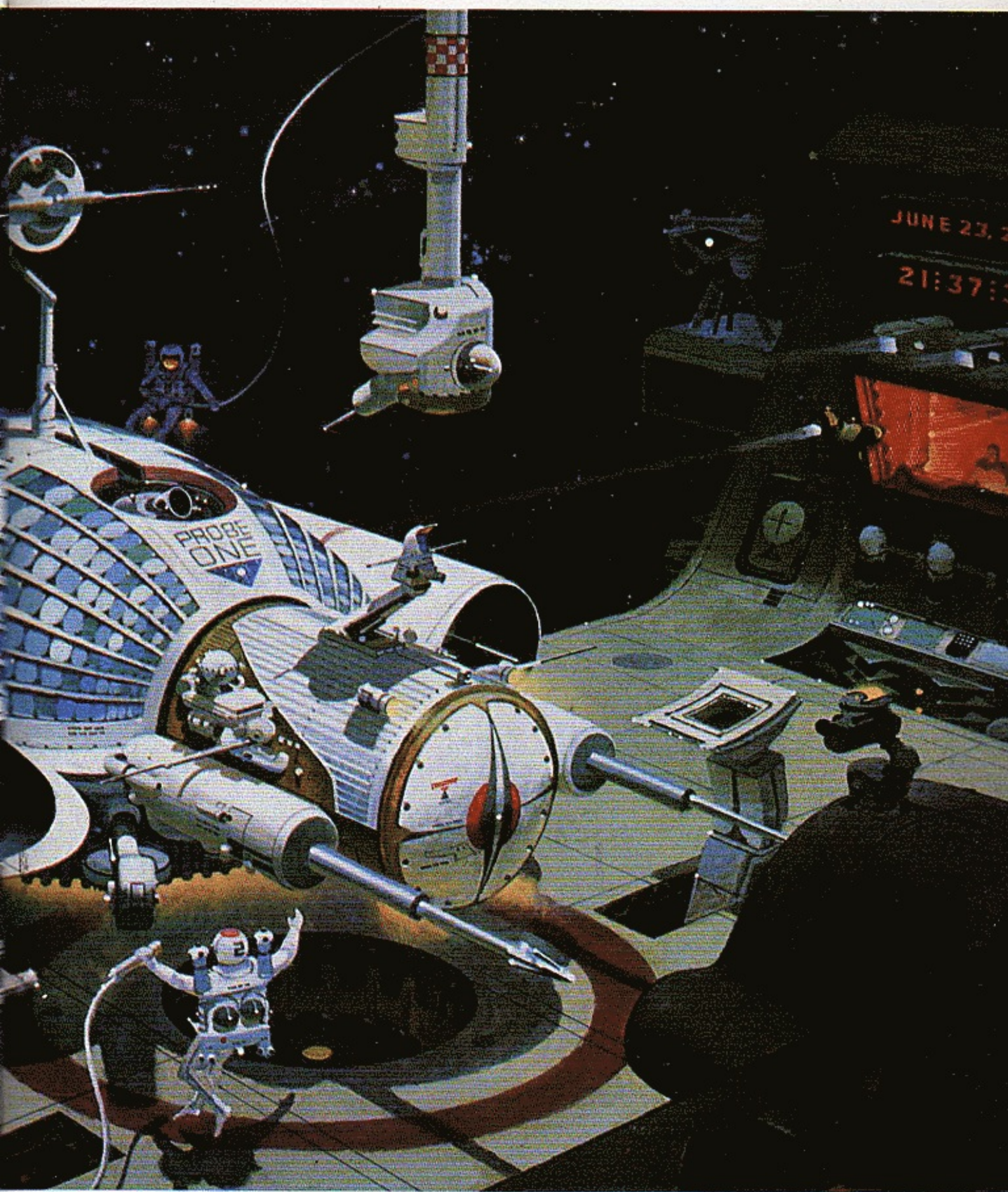
weightlessness, observe others; to sort out the emotional impact of being in space and to put it on canvas. I'd give it my best."

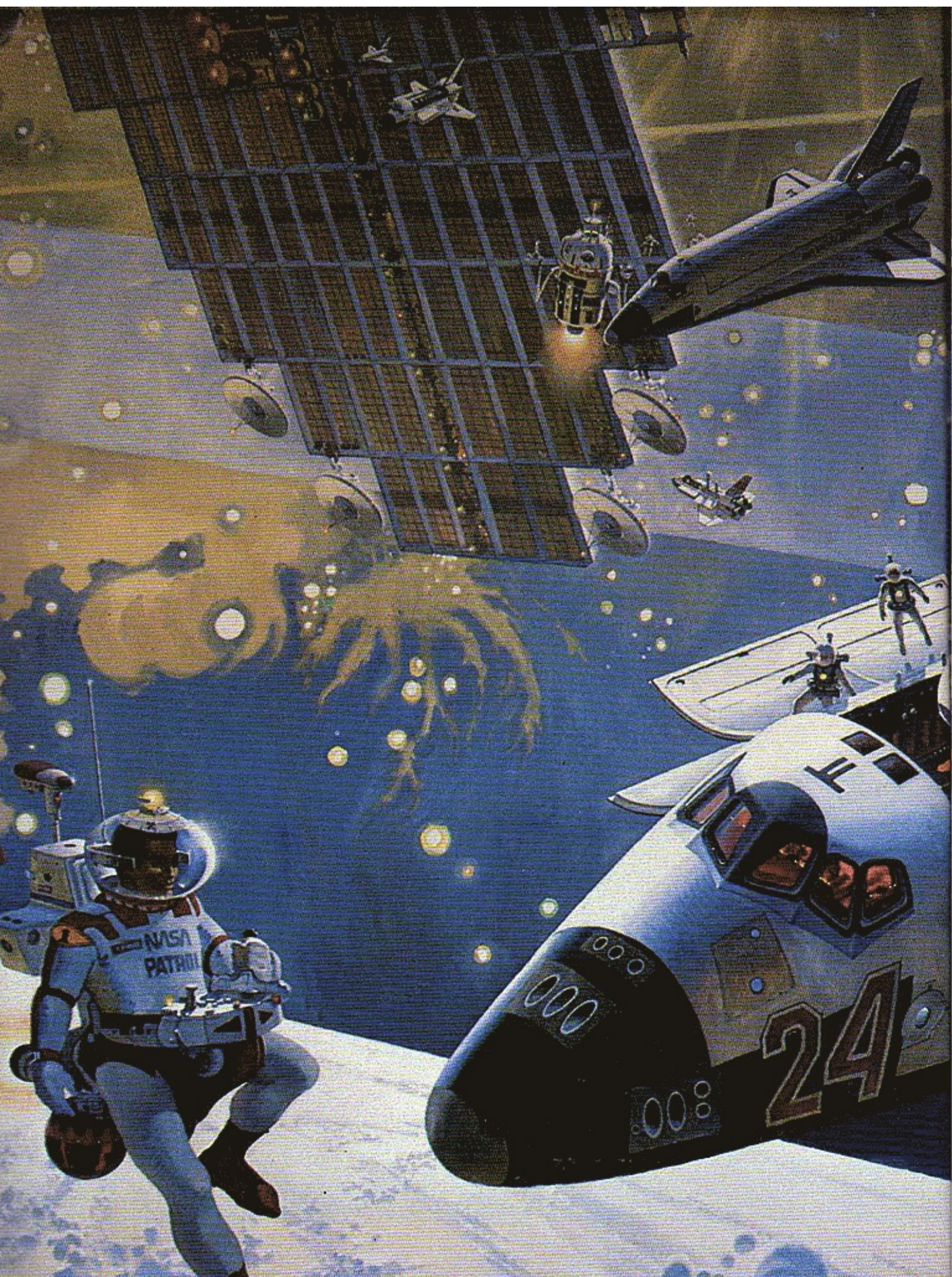
McCall's best has always been outstanding. Born in Ohio, he won a scholarship and studied at the Columbus Art School. "As a kid, I liked airplanes because they were dramatic and moved fast. I drew knights in armor, and I guess my paintings of astronauts in space suits are analogous—adventurous men risking everything, facing new challenges."

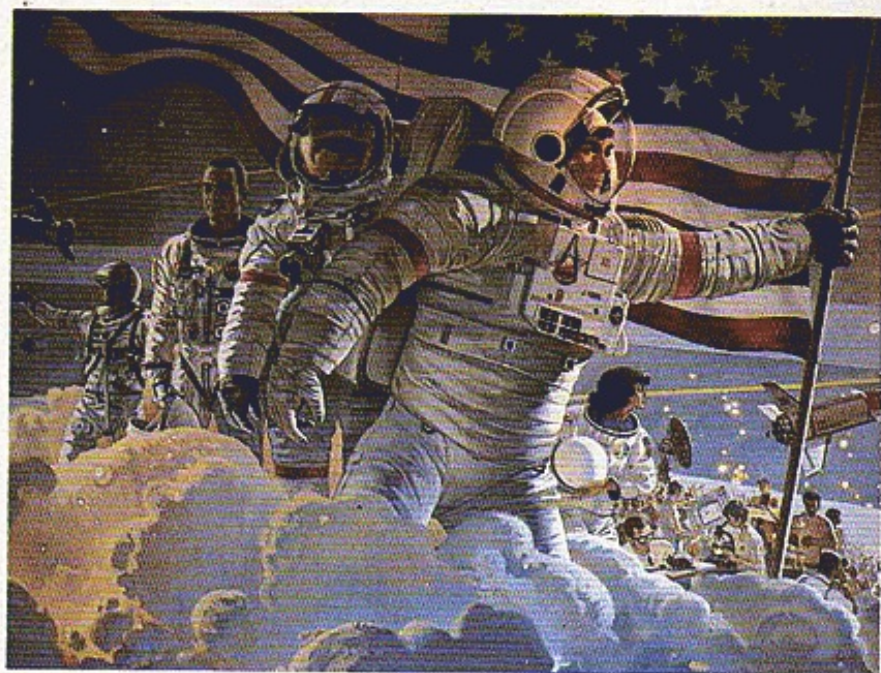
As an illustrator in New York in 1949, McCall worked for *Collier's*, *Saturday Evening Post*, and several advertising firms. His interest in flight did not abate. He sent a "To Whom It May Concern" letter to *Life* magazine together with a portfolio of his World War II combat illustrations. "I told them I believed man would be going to the moon, that I wanted to watch the launch and represent them when it happened," he recalls. *Life* eventually acknowledged the artist's query with a "we'll keep you in mind." They did. A year later he was commissioned to do 20 paintings in observance of the fifteenth anniversary of the attack on Pearl Harbor. *Sputnik* was launched the next year. *Life* soon required illustrations depicting the expanding space program. Kubrick's assignment for *2001: A Space Odyssey* followed.

“Future generations should feel proud of our accomplishments in space. . . . We are destined to explore and colonize the universe.”









The talented space artist is astonished that "so few educated people appreciate the immensity of space and know so little about the cosmos." A neophyte astronomer who owns a three-inch reflector telescope, McCall is well aware that the view from space is a deep, inky black. The mural at the Air and Space Museum, however, is painted "as beautiful and inviting rather than black and ominous. To me, the adventure in space offers incredible opportunities and rewards.

"Wernher von Braun hoped to fly in space. He wanted to be 'the world's first orbiting grandfather.'" McCall paused. Then, softly, "I'd give anything to be."

Preceding page: Mars astronaut; fueling port. Left: The Future in Johnson Space Center mural. Above: Shepard, Grissom, and Young in mural detail; manned rockets from NASA/Dryden.

McCall's enthusiasm for science reflects faith in the future.

CLAP HANDS AND SING

BY ORSON SCOTT CARD

On the screen the crippled man screamed at the lady, insisting that she must not run away. He waved a certificate. "I'm a registered rapist, damnit!" he cried. "Don't run so fast! You have to make allowances for the handicapped!" He ran after her with an odd, left-heavy lope. His enormous prosthetic phallus swung crazily, like a clumsy propeller that couldn't quite get started. The audience laughed madly. Must be a funny, funny scene!

Old Charlie sat slumped in his chair, feeling as casual and permanent as glacial debris. I am here only by accident, but I'll never move. He did not switch off the television set. The audience roared again with laughter. Canned or live? After more than eight decades of watching television, Charlie couldn't tell anymore. Not that the canned laughter had got any more real: It was the real laughter that had gone tinny, premeditated. As if the laughs were timed to come *now*, no matter what, and the poor actors could strain to get off their gags in time, but always they were just *this* much early, *that* much late.

"It's late," the television said, and Charlie started awake, vaguely surprised to see that the program had changed: Now it was a demonstration of a convenient electric breast pump to store up natural mother's milk for those times when you just can't be with baby. "It's late."

"Hello, Jock," Charlie said.

"Don't sleep in front of the television again, Charlie."

"Leave me alone, swine," Charlie said. And then: "Okay, turn it off."

He hadn't finished giving the order when the television flickered and went white, then settled down into its perpetual springtime scene that meant *off*. But in the flicker Charlie

thought he saw—who? Name? From the distant past. A girl. Before the name came to him, there came another memory: a small hand resting lightly on his knee as they sat together, as light as a long-legged fly upon a stream. In his memory he did not turn to look at her; he was talking to others. But he knew just where she would be if he turned to look. Small, with mousy hair, and yet a face that was always the child Juliet. But that was not her name. Not Juliet, though she was Juliet's age in that memory. *I am Charlie*, he thought. *She is—Rachel*.

Rachel Carpenter. In the flicker on the screen hers was the face the random light had brought him, and so he remembered Rachel as he pulled his ancient body from the chair; thought of Rachel as he peeled the clothing from his frail skeleton, delicately, lest some rough motion strip away the wrinkled skin like cellophane.

And Jock, who of course did not switch himself off with the television, recited:

"An aged man is a paltry thing, a tattered coat upon a stick."

"Shut up," Charlie ordered.

"Unless Soul clap its hands."

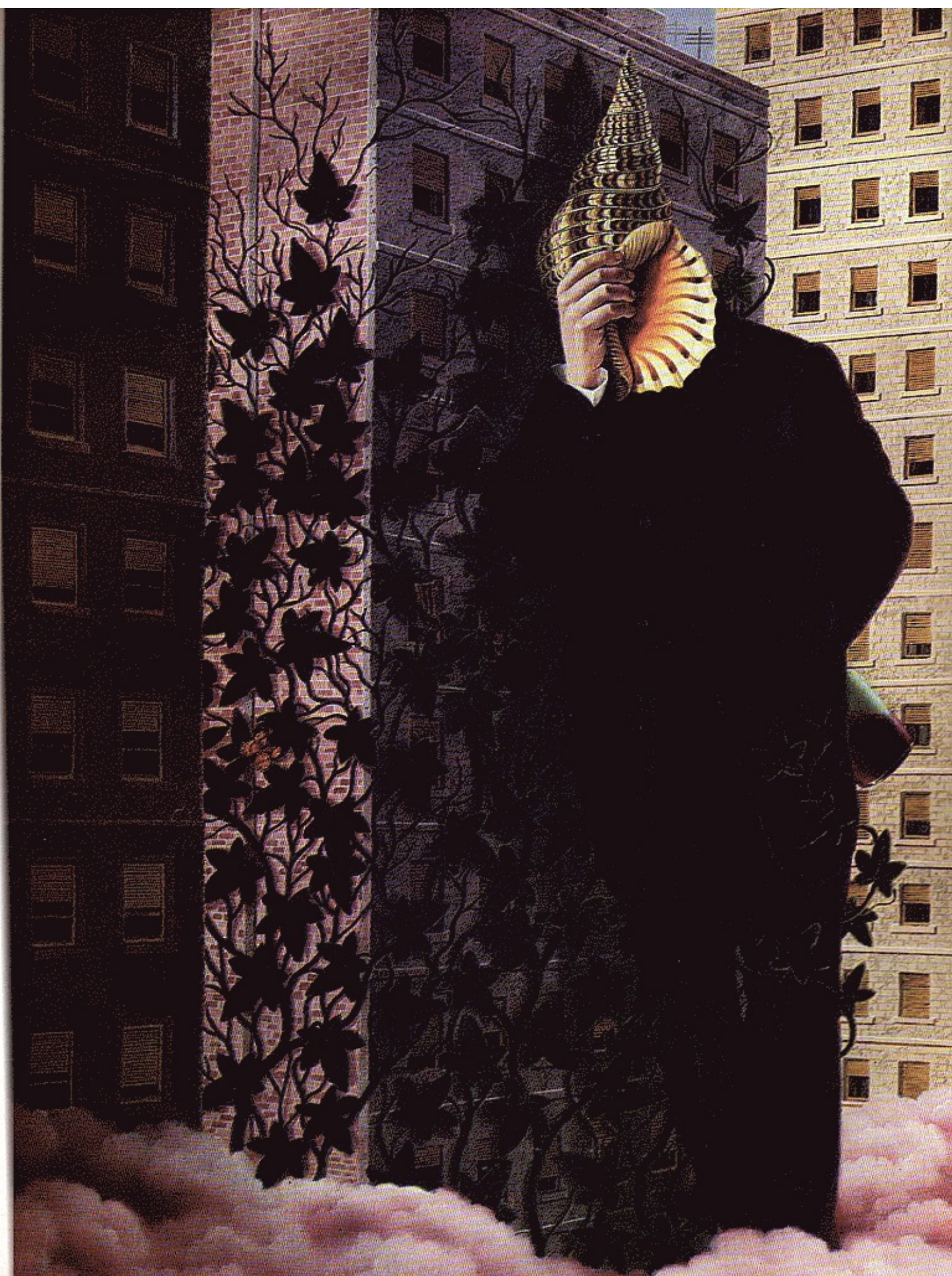
"I said shut up!"

"And sing, and louder sing, for every tatter in its mortal dress."

"Are you finished?" Charlie asked. He knew Jock was finished. After all, Charlie had programmed him to recite—*it* to recite—just that fragment every night when his shorts hit the floor.

He stood naked in the middle of the room and thought of Rachel, whom he had not thought of in years. It was a trick of being old, that the room he was in now so easily vanished, and in its place a memory could take hold. *I've made my fortune*

PAINTING BY GERVASIO GALLARDO



from time machines, he thought, and now I discover that every aged person is his own time machine. For now he stood naked. No, that was a trick of memory; memory had these damnable tricks. He was not naked. He only felt naked, as Rachel sat in the car beside him. Her voice—he had almost forgotten her voice—was soft. Even when she shouted, it got more whispery, so that if she shouted, it would have all the wind of the world in it and he wouldn't hear it at all, would only feel it cold on his naked skin. That was the voice she was using now, saying, yes, I loved you when I was twelve, and when I was thirteen, and when I was fourteen, but when you got back from playing God in São Paulo, you didn't call me. All those letters, and then for three months you didn't call me and I knew that you thought I was just a child and I fell in love with—Name? Name gone. Fell in love with a boy, and ever since then you've been treating me like. Like. No, she'd never say *shit*, not in that voice. And take some of the anger out, that's right. Here are the words... here they come: You could have had me, Charlie, but now all you can do is try to make me miserable. It's too late, the time's gone by, the time's over, so stop criticizing me. Leave me alone.

First to last, all in a capsule. The words are nothing, Charlie realized. A dozen women, not least his dear departed wife, had said exactly the same words to him since, and it had sounded just as maudlin, just as unpleasantly uninteresting every time. The difference was that when the others said it, Charlie felt himself insulated with a thousand layers of unconcern. But when Rachel said it to his memory, he stood naked in the middle of his room, a cold wind drying the parchment of his ancient skin.

"What's wrong?" asked Jock.

Oh, yes, dear computer, a change in the routine of the habit-bound old man, and you suspect what, a heart attack? Incipient death? Extreme disorientation?

"A name," Charlie said. "Rachel Carpenter."

"Living or dead?"

Charlie winced again, as he winced every time Jock asked that question; yet it was an important one, and far too often the answer these days was Dead. "I don't know."

"Living and dead, I have two thousand four hundred eighty in the company archives alone."

"She was twelve when I was—twenty. Yes, twenty. And she lived then in Provo, Utah. Her father was a pianist. Maybe she became an actress when she grew up. She wanted to."

"Rachel Carpenter. Born 1959. Provo, Utah. Attended—"

"Don't show off, Jock. Was she ever married?"

"Thrice."

"And don't imitate my mannerisms. Is she still alive?"

"Died ten years ago."

Of course. Dead, of course. He tried to imagine her—where? "Where did she die?"

"Not pleasant."

"Tell me anyway. I'm feeling suicidal tonight."

"In a home for the mentally incapable."

It was not shocking; people often outlived their minds these days. But sad. For she had always been bright. Strange, perhaps, but her thoughts always led to something worth the sometimes-convoluted path. He smiled even before he remembered what he was smiling at. Yes. Seeing through your knees. She had been playing Helen Keller in *The Miracle Worker*, and she told him how she had finally come to understand blindness. "It isn't seeing the red insides of your eyelids, I knew that. I knew it isn't even seeing black. It's like trying to see where you never had eyes at all. Seeing through your knees. No matter how hard you try, there just isn't any vision there." And she had liked him because he hadn't laughed. "I told my brother, and he

• He had gone in a THIEF before, had taken some of the standard trips into the past. Gone into the mind of an audience member at the first performance of Handel's Messiah and listened.... That was safe, to sit and listen. •

laughed," she said. But Charlie had not laughed.

Charlie's affection for her had begun then, with a twelve-year-old girl who could never stay on the normal, intelligible track, but rather had to stumble her own way through a confusing underbrush that was thick and bright with flowers. "I think God stopped paying attention long ago," she said. "Any more than Michelangelo would want to watch them whitewash the Sistine Chapel."

And he knew that he would do it even before he knew what it was that he would do. She had ended in an institution, and he, with the best medical care that money could buy, stood naked in his room and remembered when passion still lurked behind the lattices of chastity and was more likely to lead to poems than to coitus.

You overtook story, he said to the wizened man who despised him from the mirror. You are only tempted because you're bored. Making excuses because you're cruel. Lustful because your dim old dong is long past the exercise.

And he heard the old bastard answer silently, You will do it, because you can. Of

all the people in the world, you can.

And he thought he saw Rachel look back at him, bright with finding herself beautiful at fourteen, laughing at the vast joke of knowing she was admired by the very man whom she, too, wanted. Laugh all you like, Charlie said to his vision of her. I was too kind to you then. I'm afraid I'll undo my youthful goodness now.

"I'm going back," he said aloud. "Find me a day."

"For what purpose?" Jock asked.

"My business."

"I have to know your purpose, or how can I find you a day?"

And so he had to name it. "I'm going to have her if I can."

Suddenly a small alarm sounded, and Jock's voice was replaced by another. "Warning. Illegal use of THIEF for possible present-altering manipulation of the past."

Charlie smiled. "Investigation has found that the alteration is acceptable. Clear." And the program release: "Byzantium."

"You're a son of a bitch," said Jock.

"Find me a day. A day when the damage will be least—when I can..."

"Twenty-eight October 1973."

That was after he got home from São Paulo, the contracts signed, already a capitalist before he was twenty-three. That was during the time when he had been afraid to call her, because she was only fourteen, for God's sake.

"What will it do to her, Jock?"

"How should I know?" Jock answered. "And what difference would it make to you?"

He looked in the mirror again. "A difference."

I won't do it, he told himself as he went to the THIEF that was his most ostentatious sign of wealth, a private THIEF in his own rooms. I won't do it, he decided again as he set the machine to wake him in twelve hours, whether he wished to return or not. Then he climbed into the couch and pulled the shroud over his head, despairing that even this, even doing it to her, was not beneath him. There was a time when he had automatically held back from doing a thing because he knew that it was wrong. Oh, for that time! he thought, but knew as he thought it that he was lying to himself. He had long since given up on right and wrong and settled for the much simpler standards of effective and ineffective, beneficial and detrimental.

He had gone in a THIEF before, had taken some of the standard trips into the past. Gone into the mind of an audience member at the first performance of Handel's *Messiah* and listened. The poor soul whose ears he used wouldn't remember a bit of it afterward. So the future would not be changed. That was safe, to sit in a hall and listen. He had been in the mind of a farmer resting under a tree on a country lane as Wordsworth walked by and had hailed the poet and asked his name, and Wordsworth had smiled and been distant and cold, delighting in the countryside more than in those whose tillage made it beautiful. But

those were legal trips—Charlie had done nothing that could alter the course of history.

This time, though. This time he would change Rachel's life. Not his own, of course. That would be impossible. But Rachel would not be blocked from remembering what happened. She would remember, and it would turn her from the path she was meant to take. Perhaps only a little. Perhaps not importantly. Perhaps just enough for her to dislike him a little sooner, or a little more. But too much to be legal, if he were caught.

He would not be caught. Not Charlie. Not the man who owned THIEF and therefore could have owned the world. It was all too bound up in secrecy. Too many agents had used his machines to attend the enemy's most private conferences. Too often the Attorney General had listened to the most perfect of wiretaps. Too often politicians who were willing to be in Charlie's debt had been given permission to lead their opponents into blunders that cost them votes. All far beyond what the law allowed; who would dare complain now if Charlie also bent the law to his own purpose?

No one but Charlie. *I can't do this to Rachel*, he thought. And then the THIEF carried him back and put him in his own mind, in his own body, on 28 October 1973, at ten o'clock, just as he was going to bed, weary because he had been awakened that morning by a six A.M. call from Brazil.

As always, there was the moment of resistance, and then peace as his self of that time slipped into unconsciousness. Old Charlie took over and saw, not the past, but the now.

A moment before, he was standing before a mirror, looking at his withered, hanging face; now he realizes that this gazing into a mirror before going to bed is a lifelong habit. *I am Narcissus*, he tells himself, *an unbeautiful idolator at my own shrine*. But now he is not unbeautiful. At twenty-two, his body still has the depth of young skin. His belly is soft, for he is not athletic, but still there is a litherness to him that he will never have again. And now the vaguely remembered needs that had impelled him to this find a physical basis; what had been a dim memory has him on fire.

He will not be sleeping tonight, not soon. He dresses again, finding with surprise the quaint print shirts that once had been in style. The wide-cuffed pants. The shoes with inch-and-a-half heels. *Good God, I wore that!* he thinks, and then wears it. No questions from his family; he goes quietly downstairs and out to his car. The garage reeks of gasoline. It is a smell as nostalgic as lilacs and candlewax.

He still knows the way to Rachel's house, though he is surprised at the buildings that have not yet been built, which roads have not yet been paved, which intersections still don't have the lights he knows they'll have soon, should surely have already. He looks

at his wristwatch; it must be a habit of the body he is in, for he hasn't worn a wristwatch in decades. The arm is tanned from Brazilian beaches, and it has no age spots, no purple veins drawing roadmaps under the skin. The time is ten-thirty. *She'll doubtless be in bed.*

He almost stops himself. Few things are left in his private catalog of sin, but surely this is one. He looks into himself and tries to find the will to resist his own desire solely because its fulfillment will hurt another person. He is out of practice—so far out of practice that he keeps losing track of the reason for resisting.

The lights are on, and her mother—Mrs. Carpenter, dowdy and delightful, scatterbrained in the most attractive way—her mother opens the door suspiciously until she recognizes him. "Charlie," she cries out.

"Is Rachel still up?"

"Give me a minute and she will be!"

And he waits, his stomach trembling with anticipation. *I am not a virgin*, he reminds himself, *but this body does not know that*. This body is alert, for it has not yet formed the habits of meaningless passion that Charlie knows far too well. At last she comes down the stairs. He hears her running on the hollow wooden steps, then stopping, coming slowly, denying the hurry. She turns the corner, looks at him.

She is in her bathrobe, a faded thing that he does not remember ever having seen

her wear. Her hair is tousled, and her eyes show that she had been asleep.

"I didn't mean to wake you."

"I wasn't really asleep. The first ten minutes don't count anyway."

He smiles. Tears come to his eyes. Yes, he says silently. This is Rachel, yes. The narrow face; the skin so translucent that he can see into it like jade; the slender arms that gesture shyly, with accidental grace.

"I couldn't wait to see you."

"You've been home three days. I thought you'd phone."

He smiles. In fact he will not phone her for months. But he says, "I hate the telephone. I want to talk to you. Can you come out for a drive?"

"I have to ask my mother."

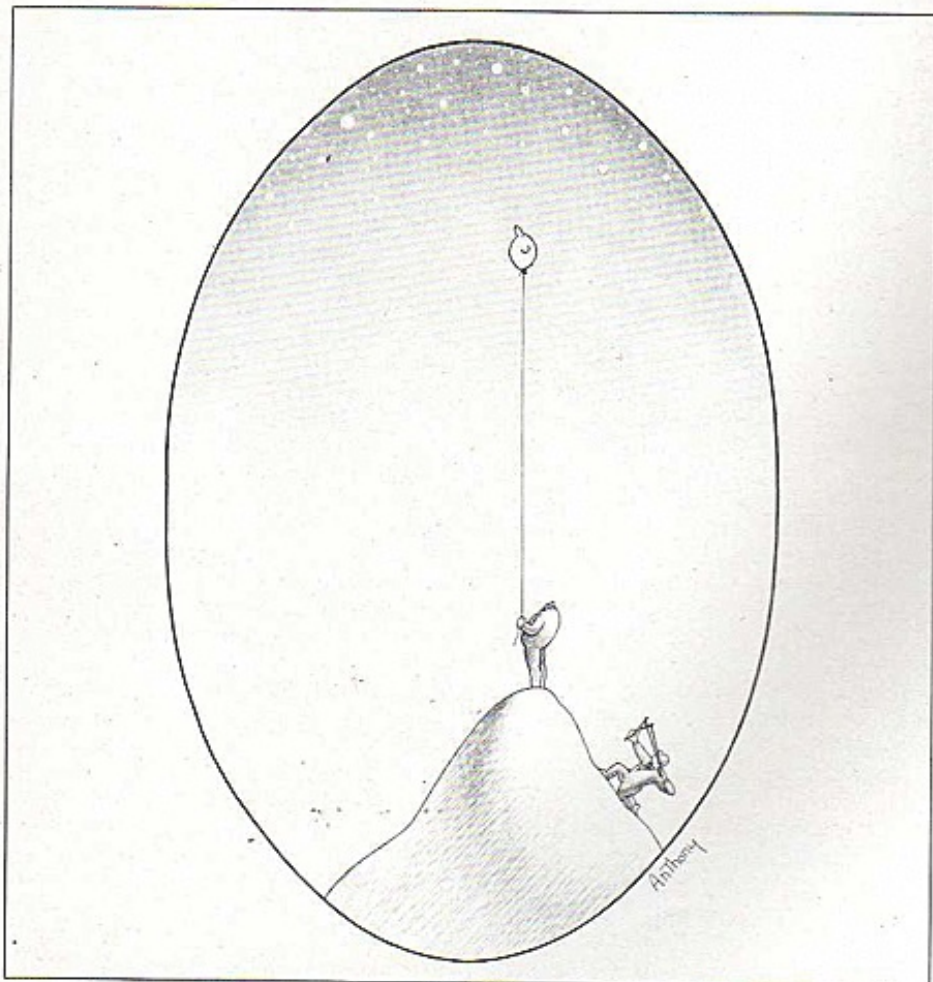
"She'll say yes."

She does say yes. She jokes and says that she trusts Charlie. And the Charlie she knows was trustworthy. *But not me*, Charlie thinks. You are putting your diamonds into the hands of a thief.

"It is cold?" Rachel asks.

"Not in the car." And so she doesn't take a coat. It's all right. The night breeze isn't bad.

As soon as the door closes behind them, Charlie begins. He puts his arm around her waist. She does not pull away or take it with indifference. He has never done this before, because she's only fourteen, just a child, but she leans against him as they walk, as if she had done this a hundred



times before. As always, she takes him by surprise.

"I've missed you," he says.

She smiles, and there are tears in her eyes. "I've missed you, too," she says.

They talk of nothing. It's just as well. Charlie does not remember much about the trip to Brazil, does not remember anything of what he's done in the three days since getting back. No problem, for she seems to want to talk only of tonight. They drive to the Castle, and he tells her its history. He feels an irony about it as he explains. She, after all, is the reason he knows the history. A few years from now she will be part of a theater company that revives the Castle as a public amphitheater. But now it is falling into ruin, a monument to the old WPA, a great castle with turrets and benches made of native stone. It is on the property of the state mental hospital, and so hardly anyone knows it's there. They are alone as they leave the car and walk up the crumbling steps to the flagstone stage.

She is entranced. She stands in the middle of the stage, facing the benches. He watches as she raises her hand, speech waiting at the verge of her lips. He remembers something. Yes, that is the gesture she made when she bade her nurse farewell in *Romeo and Juliet*. No, not made. Will make, rather. The gesture must already be in her, waiting for this stage to draw it out.

She turns to him and smiles because the place is strange and odd and does not belong in Provo, but it does belong to her. She should have been born in the Renaissance, Charlie says softly. She hears him. He must have spoken aloud. "You belong in an age when music was clean and soft and there was no makeup. No one would rival you then."

She only smiles at the conceit. "I missed you," she says.

He touches her cheek. She does not shy away. Her cheek presses into his hand, and he knows that she understands why he brought her here and what he means to do.

Her breasts are perfect but small, her buttocks are boyish and slender, and the only hair on her body is that which tumbles onto her shoulders, that which he must brush out of her face to kiss her again. "I love you," she whispers. "All my life I love you."

And it is exactly as he would have had it in a dream, except that the flesh is tangible, the ecstasy is real, and the breeze turns colder as she shyly dresses again. They say nothing more as he takes her home. Her mother has fallen asleep on the living-room couch, a jumble of the *Daily Herald* piled around her feet. Only then does he remember that for her there will be a tomorrow, and on that tomorrow Charlie will not call. For three months Charlie will not call, and she'll hate him.

He tries to soften it. He tries by saying, "Some things can happen only once." It is the sort of thing he might then have said. But she only puts her finger on his lips and says, "I'll never forget." Then she turns and

walks toward her mother, to waken her. She turns and motions for Charlie to leave, then smiles again and waves. He waves back and goes out of the door and drives home. He lies awake in this bed that feels like childhood to him, and he wishes it could have gone on forever like this. *It should have gone on like this*, he thinks. *She is no child. She was no child*, he should have thought, for THIEF was already transporting him home.

"What's wrong, Charlie?" Jock asked.

Charlie awoke. It had been hours since THIEF brought him back. It was the middle of the night, and Charlie realized that he had been crying in his sleep. "Nothing," he said.

"You're crying, Charlie. I've never seen you cry before."

"Go plug into a million volts, Jock. I had a dream."

"What dream?"

"I destroyed her."

"No, you didn't."

"It was a goddamned selfish thing to do."

"You'd do it again. But it didn't hurt her."

"She was only fourteen."

"No, she wasn't."

"I'm tired. I was asleep. Leave me alone."

"Charlie, remorse isn't your style."

Charlie pulled the blanket over his head, feeling petulant and wondering whether this childish act was another proof that he was retreating into senility after all.

"Charlie, let me tell you a bedtime story."

"I'll erase you."

"Once upon a time, ten years ago, an old woman named Rachel Carpenter petitioned for a day in her past. And it was a day with someone, and it was a day with you. So the routine circuits called me, as they always do when your name comes up, and I found her a day. She only wanted to visit, you see, only wanted to relive a good day. I was surprised, Charlie. I didn't know you ever had good days."

This program had been with Jock too long. It knew too well how to get under his skin.

"And in fact there were no days as good as she thought," Jock continued. "Only anticipation and disappointment. That's all you ever gave anybody, Charlie. Anticipation and disappointment."

"I can count on you."

"This woman was in a home for the mentally incapable. And so I gave her a day. Only instead of a day of disappointment, or promises she knew would never be fulfilled, I gave her a day of answers. I gave her a night of answers, Charlie."

"You couldn't know that I'd have you do this. You couldn't have known it ten years ago."

"That's all right, Charlie. Play along with me. You're dreaming anyway, aren't you?"

"And don't wake me up."

"So an old woman went back into a young girl's body on twenty-eight October 1973, and the young girl never knew what had happened; so it didn't change her life,

don't you see?"

"It's a lie."

"No, it isn't. I can't lie, Charlie. You programmed me not to lie. Do you think I would have let you go back and harm her?"

"She was the same. She was as I remembered her."

"Her body was."

"She hadn't changed. She wasn't an old woman, Jock. She was a girl. She was a girl, Jock."

And Charlie thought of an old woman dying in an institution, surrounded by yellow walls and pale gray sheets and curtains. He imagined young Rachel inside that withered form, imprisoned in a body that would not move, trapped in a mind that could never again take her along her bright, mysterious trails.

"I flashed her picture on the television," Jock said.

And yet, Charlie thought, *how is it less bearable than that beautiful boy who wanted so badly to do the right thing that he did it all wrong, lost his chance, and now is caught in the sum of all his wrong turns? I got on the road they all wanted to take, and I reached the top, but it wasn't where I should have gone. I'm still that boy. I did not have to lie when I went home to her.*

"I know you pretty well, Charlie," Jock said. "I knew that you'd be enough of a bastard to go back. And enough of a human being to do it right when you got there. She came back happy, Charlie. She came back satisfied."

His night with a beloved child was a lie then; it wasn't young Rachel any more than it was young Charlie. He looked for anger inside himself but couldn't find it. For a dead woman had given him a gift, and taken the one he offered, and it still tasted sweet.

"Time for sleep, Charlie. Go to sleep again. I just wanted you to know that there's no reason to feel any remorse for it. No reason to feel anything bad at all."

Charlie pulled the covers tight around his neck, unaware that he had begun that habit years ago, when the strange shadowy shapes hid in his closet and only the blanket could keep him safe. Pulled the covers high and tight, and closed his eyes, and felt her hand stroke him, felt her breast and hip and thigh, and heard her voice as breath against his cheek.

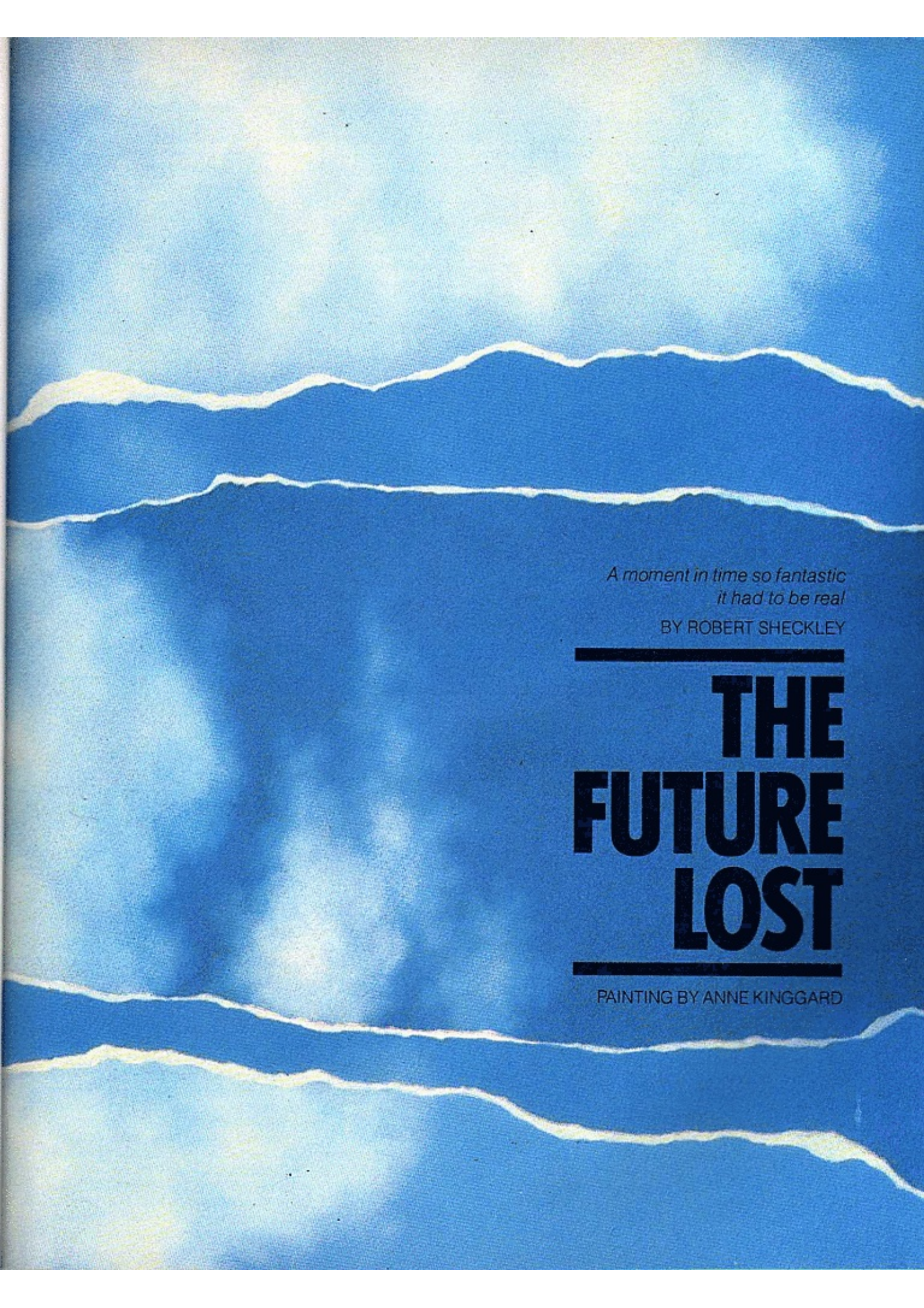
"O chestnut tree," Jock said, as he had been taught to say, "... great rooted blossomer,

"Are you the leaf, the blossom, or the bole?"

"O body swayed to music, O brightening glance,

"How can we know the dancer from the dance?"

The audience applauded in his mind while he slipped into sleep, and he thought it remarkable that they sounded genuine. He pictured them smiling and nodding at the show. Smiling at the girl with her hand raised so; nodding at the man who paused forever, then came on stage. 



*A moment in time so fantastic
it had to be real*

BY ROBERT SHECKLEY

THE FUTURE LOST

PAINTING BY ANNE KINGGARD

Leonard Nisher was found in front of the Plaza Hotel in a state of erotic agitation so extreme that it took the efforts of three policemen and a passing tourist from Biloxi, Mississippi, to subdue him. Taken to St. Clare's Hospital, he had to be put into a wet pack—a wet sheet wound around the patient's arms and upper body. This immobilized him long enough for an intern to get a shot of Valium into him.

The injection had taken effect by the time Dr. Miles saw him. Miles told two husky aides, one of them a former guard for the Detroit Lions, and a psychiatric nurse named Norma to wait outside. The patient wasn't going to assault anyone just now. He was throttled way back, riding the crest of a Valium wave where there's nothing to hassle and where even a wet pack can have its friendly aspects.

"Well, Mr. Nisher, how do you feel now?" Miles asked.

"I'm fine, Doc," Nisher said. "Sorry I caused that trouble when I came out of the space-time anomaly and landed in front of the Plaza."

"It could affect anyone that way," Miles said reassuringly.

"I guess it sounds pretty crazy," Nisher said. "There's no way I can prove it, but I have just been into the future and back again."

"Is the future nice?" Miles asked.

"The future," Nisher said, "is a pussycat. And what happened to me there—well, you're not going to believe it."

The patient, a medium-sized white male of about thirty-five, wearing an off-white wet pack and a broad smile, proceeded to tell the following story.

Yesterday he had left his job at Hanratty & Smirch, Accountants, at the usual time and gone to his apartment on East Twenty-fifth Street. He was just putting the key in the lock when he heard something behind him. Nisher immediately thought, *mugger*, and whirled around in the cockroach posture that was the basic defense mode in the Taiwanese karate he was studying. There was no one there. Instead there was a sort of red, shimmering mist. It floated toward Nisher and surrounded him. Nisher heard weird noises and saw flashing lights before he blacked out.

When he regained consciousness, someone was saying to him, "Don't worry, it's all right." Nisher opened his eyes and saw that he was no longer on Twenty-fifth Street. He was sitting on a bench in a beautiful little park with trees and ponds and promenades and strangely shaped statues and tame deer, and there were people strolling around wearing what looked like Grecian tunics. Sitting beside him on the bench was a kindly white-haired old man dressed like Charlton Heston playing Moses.

"What is this?" Nisher asked. "What's happened?"

"Tell me," the old man said, "did you happen to run into a reddish cloud re-

cently? Aha! I thought so! That was a local space-time anomaly, and it has carried you away from your own time and into the future."

"The future?" Nisher said. "The future what?"

"Just the future," the old man said. "We're about four hundred years ahead of you, give or take a few years."

"You're putting me on," Nisher said. He asked the old man in various ways where he really was, and the old man replied that he really was in the future, and it was not only true, it wasn't even unusual, though of course it wasn't the sort of thing that happens every day. At last Nisher had to accept it.

"Well, okay," he said. "What sort of future is this?"

"A very nice one," the old man assured him.

"No alien creatures have taken us over?"

"Certainly not."

"Has lack of fossil fuels reduced our

• The injection had taken effect by the time Dr. Miles saw him. Miles told two husky aides, one of them a former guard for the Detroit Lions, and a nurse named Norma to wait outside. •

standard of living to a bare subsistence level?"

"We solved the energy crisis a few hundred years ago when we discovered an inexpensive way of converting sand into shale."

"What are your major problems?"

"We don't seem to have any."

"So this is Utopia?"

The old man smiled. "You must judge for yourself. Perhaps you would like to look around during your brief stay here."

"Why brief?"

"These space-time anomalies are self-regulating," the old man said. "The universe won't tolerate for long your being here when you ought to be there. But it usually takes a little while for the universe to catch up. Shall we go for a stroll? My name is Ogun."

They left the park and walked down a pleasant, tree-lined boulevard. The buildings were strange to Nisher's eye and seemed to contain too many strange angles and discordant colors. They were set back from the street and bordered with well-kept green lawns. It looked to Nisher

like a really nice future. Nothing exotic, but nice. And there were people walking around in their Grecian tunics, and they all looked happy and well fed. It was like a Sunday in Central Park.

Then Nisher noticed one couple who had gone beyond the talking stage. They had taken their clothes off. They were, to use a twentieth-century expression, making it.

No one seemed to think this was unusual. Ogun didn't comment on it; so Nisher didn't say anything, either. But he couldn't help noticing, as they walked along, that other people were making it, too. Quite a few people. After passing the seventh couple so engaged, Nisher asked Ogun whether this was some sexual holiday or whether they had stumbled onto a fornicators' convention.

"It's nothing special," Ogun said.

"But why don't these people do it in their homes or in hotel rooms?"

"Probably because most of them happened to meet here in the street."

That shook Nisher. "Do you mean that these couples never knew each other before?"

"Apparently not," Ogun said. "If they had, I suppose they would have arranged for a more comfortable place in which to make love."

Nisher just stood there and stared. He knew it was rude, but he couldn't help it. Nobody seemed to mind. He observed how people looked at each other as they walked along, and every once in a while somebody would smile at someone, and someone else would smile back, and they would sort of hesitate for a moment, and then...

Nisher tried to ask about twenty questions at the same time. Ogun interrupted. "Let me try to explain, since you have so little time among us. You come from an age of sexual repression and rebelliousness. To you this must appear a spectacle of unbridled license. For us it is no more than a normal expression of affection and solidarity."

"So you've solved the problem of sex?" Nisher said.

"More or less by accident," Ogun told him. "We were really trying to abolish war before it obliterated us. But to get rid of war, we had to change the psychological base upon which it rests. Repressed sexuality was found to be the greatest single factor. Once this was recognized and the information widely disseminated, a universal plebiscite was held. It was agreed that human sexual mores were to be modified and reprogrammed for the good of the entire human race. Biological engineering and special clinics—all on a voluntary basis, of course—took care of that. Divorced from aggression and possessiveness, sex today is a mixture of aesthetics and sociability."

Nisher was about to ask Ogun how that affected marriage and the family when he noticed that Ogun was smiling at an attractive blonde and edging over in her direc-

tion. "Hey, Ogun!" Nisher said. "Don't leave me now!"

The old man looked surprised. "My dear fellow, I wasn't going to exclude you. Quite the contrary, I want to include you. We all do."

Nisher saw that a lot of people had stopped. They were looking at him, smiling.

"Now wait just a minute," he said, automatically taking up the cockroach posture.

But by then a woman had hold of his leg, and another was snuggling up under his armpit, and somebody else was pinching his fingers. Nisher got a little hysterical and shouted at Ogun, "Why are they doing this?"

"It is a spontaneous demonstration of our great pleasure at the novelty and poignancy of your presence. It happens whenever a man from the past appears among us. We feel so sorry for him and what he has to go back to, we want to share with him, share all the love we have. And so this happens."

Nisher felt as though he were in the middle of a Cinemascope mob scene set in ancient Rome, or maybe Babylon. The street was crowded with people as far as the eye could see, and they were all making it with one another and on top of one another and around and under and over, and in between. But what really got to Nisher was the feeling that the crowd gave off. It went completely beyond sex. It felt like a pure ocean of love, compassion, and understanding. He saw Ogun's face receding in a wave of bodies and called out, "How far does this thing go?"

"Visitors from the past always send out big vibrations," Ogun shouted back. "This will probably go all the way."

All the way? Nisher couldn't figure out what he was talking about. Then he got it and said, almost reverently, "Do you mean—planetwide?"

Ogun grinned, and then he was gone. Nisher saw the way it had to be—this group of people loving one another and pulling more and more people into it as the vibes got stronger and stronger until everybody in the world was in on it. To Nisher this was definitely Utopia. He knew he had to figure out some way of bringing this message back to his own time, some way to convince people. Then he looked up and saw that he was on Central Park South in front of the Plaza.

"I suppose the transition was just too much for you?" Miles asked.

Nisher smiled. His eyelids were drooping. The Valium rush was passing, and he was coming down fast.

"I guess I just freaked out," Nisher said. "I thought I could explain it to everyone. I thought I could just grab people and make them give up their hang-ups, that I could show them how their bodies were shaped for love. But I went at it too hysterically, of course; I scared them. And then the cops grabbed me."

"How do you feel now?" Miles asked.

"I'm tired and disappointed, and I've come back to my senses, if that's what you want to call it. Maybe it was all a hallucination. That doesn't matter. What counts is that I'm back and in my own day and age when we still have wars and energy crises and sexual hang-ups, and nothing I can do will change that."

"You seem to have made a very rapid adjustment," Miles said.

"Hell, yes. No one ever accused Leonard Nisher of being a slow adjuster."

"You sound good to me," Miles said. "But I would like you to stay here for a few days. This is not a punishment, you understand. It is genuinely meant as an assistance to you."

"Okay, Doc," Nisher said drowsily. "How long must I stay?"

"Perhaps no more than a day or two. I'll release you as soon as I'm satisfied with your condition."

"Fair enough," Nisher mumbled. And then he fell asleep. Miles told the orderlies to stand by and alerted the psychiatric nurse. Then he went to his nearby apartment to get some rest.

Nisher's story haunted Miles as he broiled a steak for his dinner. It couldn't be true, of course. But suppose, just suppose, it had actually happened. What if the future had achieved a state of polymorphous perverse sexuality? There was, after all, a

fair amount of evidence that space-time anomalies did exist.

Abruptly he decided to visit his patient again. He left his apartment and went back to the hospital, hurrying now, impelled by a strange sense of urgency.

There was no one at the reception desk on Wing 2. The policeman normally stationed in the corridor was missing. Miles ran down the hall. Leonard's door was open, and Miles peered in.

Someone had folded Leonard's cot and leaned it against the wall. That left just enough room on the floor for two aides (one a former guard for the Detroit Lions), a psychiatric nurse named Norma, two student nurses, a policeman, and a middle-aged woman from Denver who had been visiting a relative.

"Where is Leonard?" cried Miles.

"That guy musta hypnotized me," the policeman said, struggling into his trousers.

"He preached a message of love," said the woman from Denver, wrapping herself in Leonard's wet pack.

"Where is he?" Miles shouted.

White curtains flapped at the open window. Miles stared out into the darkness. Nisher had escaped. His mind inflamed by his brief vision of the future, he was sure to be preaching his message of love up and down the country. *He could be anywhere. Miles thought. How on earth can I find him? How can I join him?* ☐



"All of them are hot lines!"

*Before he could qualify as a space pilot,
Cadet Pirx had to prove
his skills, his courage, and his luck*

THE TEST

BY STANISLAW LEM

Cadet Pirx!" Bullpen's harsh voice snapped him out of his daydreaming. He had just had visions of a two-crown piece lying tucked away in the fob pocket of his old civvies, the ones stashed at the bottom of his locker. A jingling, shiny silver coin—all but forgotten. A while ago he could have sworn nothing was there, an old mailing stub at best, but the more he thought about it, the more persuaded he was that one *might* be there, so that by the time Bullpen called out his name he was absolutely sure of it. The coin was now sufficiently real that he could feel it bulging in his pocket, so round and sleek to the touch. There was his ticket to the movies, he thought, with half a crown to spare. If he settled for some newsreel shorts, that would leave a crown and a half, of which he'd squirrel away a crown and blow the rest on the

slot machines. Oh, what if the machine suddenly went haywire and coughed up so many coins into his waiting hands that he couldn't stuff his pockets fast enough? Well, why not? It happened to Smiga, didn't it? Pirx was already reeling under the burden of his unexpected windfall when Bullpen roused him with a bang.

Folding his hands behind his back and shifting his weight to his good leg, his instructor asked, "Cadet Pirx, what would you do if you were on patrol and encountered a ship from an alien planet?"

Pirx opened his mouth wide, as if the answer were there and all he had to do was to force it out. He looked like the last person on Earth who knew what to do when meeting up with a vessel from an alien planet.

"I would maneuver closer," he answered, his voice muted and strangely hoarse.

The class froze in welcome anticipation of some comic re-

lief. They weren't disappointed.

"Very good," Bullpen said in a fatherly sort of way. "Then what would you do?"

"I would stop," Pirx blurted out, sensing that he was drifting off into realms that lay vastly beyond his competence. Furiously he racked his empty brains in search of the appropriate paragraphs from his Space Manual, but it was as if he had never laid eyes on it. Sheepishly he lowered his gaze, and as he did so, he noticed that Smiga was trying to prompt him—with his lips only. One by one he deciphered Smiga's words and repeated them out loud, before he had a chance to digest them fully.

"I'd introduce myself."

A howl went up from the class. Bullpen struggled for a moment; then he, too, exploded with laughter, only to assume a serious expression once again.

"Cadet Pirx, you will report to me tomorrow with your naviga-

tion textbook. Cadet Boerst!"

Pirx sat down at his desk as if it were made of uncongealed glass. He wasn't even sore at Smiga; that's the kind of guy he was, always one to play a joke. He didn't catch a word of what Boerst was saying; Boerst was trying to plot a graph while Bullpen was up to his old trick of turning down the electronic computer, leaving the cadet to get bogged down in his computations. School regulations permitted the use of a computer, but Bullpen was of a different mind. "A computer is only human," he used to say. "It, too, can break down." Pirx wasn't sore at Bullpen, either. Fact is, he wasn't sore at anyone. Hardly ever. Five minutes later he was standing in front of a shop window on Dyerhoff Street, his attention caught by a display of gas pistols, good for firing blanks or live ammo, a set consisting of one pistol and a hundred cartridges priced at six crowns. Needless to say, he

PAINTING BY DON MAITZ



Mait

only imagined he was window-browsing on Dyerhoff Street.

The bell rang and the class emptied, but without all that yelling and stampeding of lower classmen. No, sir, these weren't kids anymore! Half of the class meandered off in the direction of the cafeteria because, although no meals were being served at that time, there were other attractions to be had—a new waitress, for example (word had it she was a knockout). Pirx strolled leisurely past the glass cabinets where the stellar globes were stored, and with every step he saw his hopes of finding a two-crown piece in the pocket of his civvies dwindle a little more. By the time he reached the bottom of the staircase, he realized that the coin was just a figment of his imagination.

Hanging around the lobby were Boerst, Smiga, and Payartz. For a semester he and Payartz had been deskmates in cosmodesy, and he had Payartz to thank for all the inkblots in his star atlas.

"You're up for a trial run tomorrow," Boerst let drop just as Pirx was about to overtake them.

"No sweat," came his lackadaisical reply. He was nobody's fool.

"Don't believe me? Read for yourself," Boerst said, tapping a finger on the glass pane of the bulletin board.

Pirx had a mind to keep going, but his head involuntarily twisted around on its axis. The list showed only three names—and there it was, right at the top, as big as blazes: Cadet Pirx.

For a second his mind was a total blank. Then he heard a distant voice, which turned out to be his own.

"Like I said, no sweat."

Leaving them, he headed down a walkway lined with flower beds. That year the beds were planted with forget-me-nots, artfully arranged in the pattern of a descending rocket ship, with streaks of now-faded buttercups suggesting the exhaust flare. But right now Pirx was oblivious of everything—the flower beds, the pathway, the forget-me-nots—and even of Bullpen, who at that very instant was hurriedly ducking out of the institute by a side entrance, and whom Pirx narrowly missed bumping into on his way out. Pirx saluted as they stood cheek to jowl.

"Oh, it's you, Pirx," said Bullpen. "You're flying tomorrow, aren't you? Well, have a good takeoff. Maybe you'll be lucky enough to . . . er . . . meet up with those people from alien planets."

Once inside his room—it was too cramped to serve as anything but a single—he debated whether he should open the locker. He knew exactly where his old pants were stashed. He had held onto them, despite the fact that it was against the rules—or maybe because of that—and even though he had hardly any use for them now. Closing his eyes, he crouched down, stuck his hand through the crack in the door, and gave the pocket a probing pat. Sure enough, it was empty.

He was standing in his unpressurized suit on the metal catwalk, just under the hangar ceiling, and, with neither hand free, was bracing himself against the cable railing with his elbow. In one hand he held his navigation book, in the other the crib sheet Smiga had lent him. The whole school was alleged to have flown with this pony, though how it managed to find its way back every time was a mystery, all the more so since, after completing the flight test, the cadets were immediately transferred from the institute to the north, to the base camp, where they began cramming for their final exams. Still the fact remained: It always came back. Some claimed that it was parachuted down. Facetiously, of course.

So Pirx stood on the metal catwalk and waited for the CO to show up in the company of both instructors. *What is keeping them?* he wondered. Lift-off was scheduled for 1940 hours, and it was already 1927. Suddenly he heard footsteps approaching from the other end, but in the dark under the hangar ceiling it took him a while before he could make out who it was.

All three were looking very spiffy: As was customary on such occasions, they were decked out in full uniform—especially the CO. Even uninflated, however, Pirx's space suit looked as graceful as twenty football uniforms stuck together, not to mention the long intercom and radiophone terminals dangling from either side of his neck-ring-disconnect, the respirator hose bobbing up and down near his throat, and the reserve oxygen bottle strapped tightly to his back—so tightly that it pinched.

Suddenly the whole catwalk began to undulate as someone came up from behind. It was Boerst. He was wearing the same kind of space suit, and he gave Pirx a stiff salute, mammoth glove and all, and went on standing in this position as if just aching to knock Pirx overboard.

When the others had gone ahead, Pirx asked, somewhat bewilderedly, "What're you doing here? Your name wasn't on the flight list."

"Brendan got sick. I'm taking his place."

Pirx was momentarily flustered. This was the one area—the one and only area—in which he was able to climb just a millimeter higher, to those empyreal realms that Boerst seemed to inhabit so effortlessly. Not only was Boerst the brightest in the program, for which Pirx could fairly easily forgive him—he could even muster some respect for the man's mathematical genius, ever since the time he had watched Boerst take on the computer, faltering only when it came to roots of the fourth power—and not only were his parents sufficiently well-heeled that he didn't have to bother dreaming about two-crown pieces lying tucked away in the pocket of his civvies, but he was also a top scorer in gymnastics, a crackerjack of a jumper, a terrific dancer, and, like it or not, he was handsome to boot. Very handsome in fact—something that could not exactly be

said of Pirx.

They walked the distance of the catwalk, threading their way between the girders, filing past the rockets parked next to one another in a row, before emerging in the shaft of light that fell vertically through a two-hundred-meter sliding panel in the ceiling. Two cone-shaped giants—somehow they always reminded Pirx of giants—each measuring forty-eight meters in height and eleven meters in diameter, in the first-stage booster section, stood side by side on an assembly of concrete exhaust deflectors.

The hatch covers were open and the gangways already in place for boarding. At about the midway point the gangways were blocked by a lead stand, planted with a little red pennon on a flexible staff. He knew the procedure. Question: "Pilot, are you ready to carry out your mission?" Answer: "Yes, sir, I am"—and then, for the first time in his life, he would proceed to move aside the pennon. Suddenly he had a premonition: During the boarding ceremony he saw himself tripping over the railing and taking a nose dive all the way to the bottom. Accidents like that happened. And if such accidents happened to anyone, they were *bound* to happen to Pirx. In fact, there were times when he was apt to think of himself as a born loser, though his instructors were of a different opinion. To them he was just a moron and a bumbler, whose mind was never on the right thing at the right moment.

Out of the corner of his eye he noticed that Boerst had stationed himself in the prescribed place, a step away from the gangway, and that he was standing at attention, his hands pressed flat against the rubber air bladders of his space suit.

On him that wacky costume looks tailor-made, Pirx thought, and on me it looks like a bunch of soccer balls. How come Boerst's looked uninflated and his own all puffy in places?

He caught only snatches of what was said to Boerst, and, ramrod-stiff, Boerst fired off his answers so quickly that Pirx didn't stand a chance. Then it was his turn. No sooner had the CO started addressing him than he suddenly remembered something: There were supposed to be three of them flying. Where was the third? Luckily for him, he caught the CO's last words and managed to blurt out, just in the nick of time, "Cadet Pirx, ready for lift-off."

"Hm . . . I see," said the CO. "And do you declare that you are fit, both physically and mentally . . . ahem . . . within the limits of your capabilities?"

The CO was fond of lacing routine questions with such flourishes—something he could allow himself as the CO.

Pirx declared that he was fit.

"Then I hereby designate you as pilot for the duration of the flight," the CO said, repeating the sacred formula, and he went on.

"Mission: vertical launch at half booster power. Ascent to ellipsis B-sixty-eight. Cor-

rection to stable orbital path, with orbital period of four hours and twenty-six minutes. Proceed to rendezvous with shuttlecraft vehicles of the JO-two type. Probable zone of radar contact: sector three, satellite PAL, with possible deviation of six arc seconds. Establish radio contact for the purpose of maneuver coordination. The maneuver: escape orbit at sixty degrees twenty-four minutes north latitude, one hundred fifteen degrees three minutes eleven seconds east longitude. Initial acceleration: two-point-two-g. Terminal acceleration: zero. Without losing radio contact, escort both JO-two ships in trifurcation to moon, commence lunar insertion for temporary equatorial orbit as per LUNA PELENG, verify orbital injection of both piloted ships, then escape orbit at acceleration and course of your own discretion, and return to stationary orbit in the radius of satellite PAL. There await further instructions."

"Pilot Pirx, are you ready for blast-off?"

"Ready!" Pirx replied. Right now he was conscious of only one desire: to be in the control cabin. He dreamed of the moment when he could unzip his space suit, or at least the neck ring.

The CO stepped back.

"Board your rocket!" he bellowed in a magnificent voice—a voice that rose above the muffled roar of the cavernous hangar like a cathedral bell.

Pirx did an about-face, grabbed the red pennon, bumped against the railing, but regained his balance in the nick of time, and marched down the narrow gangway like a zombie. He was not halfway across when Boerst, looking for all the world like a soccer ball from the back, had already boarded his rocket ship.

Pirx stuck his legs inside, braced himself against the metal housing, scooted down the flexible chute without touching the ladder rungs—"Rungs are only for the gofers," was one of Bullpen's pet sayings—and proceeded to button up the cabin.

The interior lights automatically went on the moment he closed the outside hatch. After sealing off the cabin, he climbed a small flight of steps padded with a rough but pliant material, before reaching the pilot's seat.

Now why in hell's name do they have to squeeze the pilot into a glass blister three meters in diameter when these one-man rockets are cramped enough as it is? Pirx wondered. The blister, though transparent, was made not of glass, of course, but of some Plexiglas material having roughly the same texture and resilience as extremely hard rubber. The pilot's encapsulated contour couch was situated in the very center of the control room proper. Thanks to the cabin's cone-shaped design, the pilot, by sitting in his "dentist's chair"—as it was called in space pilot's parlance—and rotating on its vertical axis, was able to monitor the entire instrument panel through the walls of the blister, with all its dials, video screens (located fore,

aft, and on one side), computer displays, and astrograph, as well as that holy of holies, the trajectory meter.

Once in the proper reclining position, he had trouble bending over at the waist to attach all the loose cables, hoses, and wires—the ones dangling from his suit—to the terminals sticking out of the seat. Every time he leaned forward, his suit would bunch up in the middle, pinching him, so that it was no wonder he confused the radio cable and the heating cable. Luckily, each was threaded differently, but he had to break out in a terrific sweat before discovering his mistake. As the compressed air instantly inflated his suit with a whishing noise, he leaned back with a sigh and began to fasten his thigh and shoulder straps, using both hands.

The right strap snapped into place, but the left one was more defiant. Because of the balloon-sized neck dam, he had trouble turning around. So he had to fumble around blindly for the large snap hook. Just

*He was standing
in his unpressurized suit on
the metal catwalk.
In one hand he held his
navigation book,
in the other the crib sheet.
... The whole school
had flown with this pony.*

then he heard muffled voices coming over his earphones: "Pilot Boerst aboard AMU-eighteen! Lift-off on automatic countdown of zero. Attention, are you ready?"

"Pilot Boerst aboard AMU-eighteen and ready for lift-off on automatic countdown of zero!" the cadet fired back.

Damn that hook, anyhow! At last it clicked into place, and Pirx sank back into the soft contour couch, as bushed as if he'd just returned from a deep-space probe.

"Minus twenty-three, twenty-two, twenty-one—" The count rambled on in his earphones with a steady patter.

"Zero!" a voice blared in his earphones. All at once Pirx heard a muffled but prolonged rumble, his contour couch shook, and flickers of light snaked across the glass canopy, under which he lay staring up at the ceiling panel, taking readings:

astrograph, air-cooling gauges, main-stage thrusters, sustaining and vernier jets, neutron flux density, isotopic-contamination gauge, not to speak of the eighteen other instruments designed almost exclusively to monitor the booster's performance. The vibrations then began to slacken, the sheet of racket tapered off

overhead, and the thunderous roar grew fainter, more like a distant thunderstorm, before giving way to a dead silence.

Then a hissing and a humming, but so sudden he had hardly any time to panic. The automatic sequencer had activated the previously dormant screens, which were always disconnected by remote control to protect the camera lenses from being damaged by the blinding atomic blast of a nearby launch.

These automatic controls sure come in handy, thought Pirx. He was still miles away in his thoughts when his hair suddenly stood on end underneath his dome-shaped helmet.

My Gawd, I'm next. Now it's my turn! suddenly flashed through his mind.

"Pilot Pirx aboard AMU-twenty-seven!" The voice booming into his ear roused him from his predicament. "Lift-off on automatic countdown of zero! Attention, are you ready, pilot?"

Not yet! he felt like yelling; instead he said, "Pilot Boerst—Pilot Pirx aboard AMU-twenty-seven and ready for ... uh ... lift-off on automatic countdown of zero."

He had been on the verge of saying, "Pilot Boerst," because he still had Boerst's words fresh in his memory. "You nut," he said to himself in the ensuing silence. Then the automatic countdown—why did these recorded voices always have to sound like an NCO?—barked, "Minus sixteen, fifteen, fourteen ..."

Pirx broke out in a cold sweat. There was something he was forgetting—something terribly important, a matter of life and death.

... six, five, four ...

His sweaty fingers squeezed the hand-grip. Luckily, it had a rough finish. Does everyone work up such a sweat? he wondered. Probably—it crossed his mind just before the earphones snarled, "Zero!"

His left hand instinctively pulled back on the lever until it reached the halfway mark. There was a terrific blast, and his chest and skull were flattened by some resilient, rubberlike press. The booster! was his last thought before his eyesight began to dim. But only a little, and then not for long. Gradually his vision improved, though the unrelenting pressure had spread to the rest of his body. Before long he could make out all the video screens—at least the three opposite him—now inundated with a torrent of milk gushing from a million overturned cans.

I must be breaking through the clouds, he thought.

He was just starting to make himself comfortable, pressing the armrest to raise the seat in back, when he suddenly went numb all over.

The crib! Where's the crib sheet?

This was that awfully important detail he couldn't remember at the time. He scoured the deck with his eyes, now totally oblivious of the swarm of pulsating gauges. The crib sheet had slipped down under the contour couch. He tried to bend

over, but he was held back by his torso straps; without a moment to lose, with a sinking sensation as if perched on top of some collapsing tower, he flipped open his navigation book—which until now had been stored in his thigh pocket—and yanked the flight plan from the envelope. A mental blackout. *Where the hell is orbit B-sixty-eight, anyway? That must be it there!* He checked the trajectory and went into a roll. Much to his surprise, it worked.

Being strapped to his seat, except for a feeling of weightlessness, he hardly noticed the loss of gravitation. The forward screen was blanketed with stars, with a brilliant white border skirting the very bottom. The lateral screens showed nothing but a star-studded black void. But the deck screen—ah! Earth was now so immense that it took up the whole screen, and he feasted his eyes on it as he flew over at an altitude of seven hundred kilometers at perigee and twenty-four hundred kilometers at apogee. *Hey, isn't that Greenland down there?* But before he could verify what it was, he was already sailing over northern Canada. The North Pole was capped with iridescent snow, the ocean stood out round and smooth—violet-black, like cast iron—there were strangely few clouds, and what few there were looked like gobs of watery mush splattered on top of Earth's highest points of elevation.

He glanced at the clock. He had been spaceborne for exactly seventeen minutes.

It was time to pick up PAL's radio signal, to start monitoring the radar screens as he passed through the satellite's contact zone. *Now, what were their names again? RO? No—JO. And let's see, their numbers were...* He glanced down at the flight plan, stuck it back into his pocket along with the navigation book, and turned up the intercom on his chest. At first there was just a lot of screeching and crackling—cosmic interference. *What system was PAL using? Oh, yeah—Morse code.* He listened closely, his eyes glued to the video screens, and watched as Earth slowly revolved beneath him and stars scudded by—but no PAL.

Then he heard a buzzing noise.

Could that be it? he wondered, but immediately he rejected the idea. *You're crazy. Satellites don't buzz. But what else could it be? Nothing, that's what. Or was it something else?*

A critical malfunction?

Then he spotted it.

It was a giant of a fly, one of those ugly, greenish-black brutes specially designed to make life miserable—a pestering, pesky, idiotic, and by the same token shrewd and cunning fly, which had miraculously—and how else?—stowed away in the ship's control cabin and was now zooming about in the space outside the blister, occasionally ricocheting off the illuminated instrument gauges like a buzzing pellet.

Whenever it took a pass at the computer, it came over his earphones like a four-

engine prop plane. Mounted on the computer's upper frame was a backup microphone, which gave a pilot access to the computer outside the encapsulated seat in the event his on-board phone was disconnected and he found himself without a laryngophone. One of the many backup systems aboard the ship.

Bzzzzz... He winced; the fly was crawling around on the computer, in the vicinity of the mike. Then nothing, dead silence, as it stopped to preen its wings. *You lousy bastard!*

Then a faint but steady bleeping came over his earphones: dot-dot-dot—dash—dot-dot—dash—dash—dot-dot-dot—dash.

Okay, Pirx, now keep your eyes peeled! he told himself. He raised the couch a little, as if to take in all three video screens at once, checked the sweeping phosphorescent radar beam, and waited. Though nothing showed on the radar screen, he distinctly heard a voice calling: "A-seven Terraluna, A-seven Terraluna, sector three, course one hundred thirteen, PAL PELENG calling. Request a reading. Over."

Oh, crap, how am I ever going to hear my two JOs now?

The buzzing in his earphones suddenly stopped. A second later a shadow fell across his face, from above, much as if a bat had landed on an overhanging lamp. It was the fly, which was now crawling across the blister and exploring its interior. The blips were coming with greater frequency now, and it wasn't long before he sighted the eighty-meter-long aluminum cylinder, mounted with an observation spheroid, as it flew over him at a distance of roughly four hundred meters, possibly more, and gradually overtook him.

"PAL PELENG to A-seven Terraluna, one-hundred-eighty-point-fourteen, one-hundred-six-point-six. Increasing linear deviation. Out."

"Albatross-four Aresterra, calling PAL Central, PAL Central. Am coming down for refueling, sector two. Am coming down for refueling, sector two. Running on reserve supply. Over."

"A-seven Terraluna, calling PAL PELENG..."

The rest was lost in the buzzing. Then silence.

"Central to Albatross-four Aresterra, refuel quadrant seven, Omega Central, refuel quadrant seven. Out."

They would pick out this spot to rendezvous, thought Pirx, who was now swimming in his sweat-absorbent underwear. *This way I won't hear a thing.*

The fly was describing frenetic circles on the computer's console, as if hell-bent on catching up with its own shadow.

"Albatross-four Aresterra, Albatross-four Aresterra to PAL Central, approaching quadrant seven. Request radio guidance."

The radio static grew steadily fainter until it was drowned out by the buzzing. But not before he managed to catch the following

message: "JO-two Terraluna, JO-two Terraluna, calling AMU-twenty-seven, AMU-twenty-seven. Over."

I wonder who he's calling, Pirx mused, and he nearly jumped out of his straps.

AMU, he wanted to say, but not a sound could he emit from his hoarse throat. His earphones were buzzing. The fly. He closed his eyes.

"AMU-twenty-seven to JO-two Terraluna, position quadrant four, sector PAL, am turning on navigation lights. Over."

He switched on his navigation lights—two red ones at the side, two green ones on the nose, a blue one aft—and waited. Not a sound except for those made by the fly.

"JO-two ditto Terraluna, JO-two Terraluna, calling..." Buzz-buzz, hum-hum... *Does he mean me?*

"AMU-twenty-seven to JO-two ditto Terraluna, position quadrant four, perimeter sector PAL, all navigation lights on. Over."

When both JO ships started transmitting at the same time, Pirx switched on the sequence selector, but there was too much interference. The buzzing fly, of course.

I'll hang myself! It never occurred to him that such a remedy was out of the question because of the effects of weightlessness.

Just then he sighted both ships on the radar screen. They were following him on parallel courses, spaced no more than nine kilometers apart, which was prohibited; being in the pilot ship, it was up to him to make them adhere to the prescribed distance of fourteen kilometers. Just as he was checking the location of the blips on the radar screen, his old friend the fly landed on one of them. In a fit of anger he threw his navigation book at it, but the book was deflected by the blister's Plexiglas wall; instead of sliding down, it bumped against the ceiling, where, because of the zero gravity, it fluttered aimlessly about in space. Seemingly unruffled, the fly strolled merrily on its way across the screen.

"AMU-twenty-seven Terraluna to JO-two ditto JO-two. I have you in range. You are hard aboard. Switch over to parallel course with a correction of oh-point-oh-one. Stand by on completion of maneuver. Out."

Gradually the distance between the blips began to widen, all communication being temporarily interrupted by the fly as it embarked on a noisy little promenade around the computer's microphone. Pirx had run out of things to throw; the flight book was still hovering overhead, lithely flapping its pages.

"PAL Central to AMU-twenty-seven Terraluna. Abandon outer quadrant, abandon outer quadrant, am assuming transsolar course. Over."

He would try to screw things up! Pirx mentally fumed. *What the hell do I care about the transsolar? Anyone knows that spaceships flying in group formation have priority.* He began shouting in reply, and in this shouting of his there was vented all his impotent fury, caused by the fly.

"AMU-twenty-seven Terraluna to PAL Central. Negative, am not abandoning

outer quadrant, to hell with your transsolar, am flying in triformation. AMU-twenty-seven, JO-two ditto JO-two, squadron leader AMU-twenty-seven Terraluna. Out."

I didn't have to say, "To hell with your transsolar," he thought. *That'll cost me a few points for sure. Oh, they can all damn well go to hell! I'll probably get docked for the fly, too.*

It could only have happened to him. A fly! Wow, big deal! He could just see Smiga and Boerst bursting a gut when they got wind of that crazy-assed fly. It was the first time since lift-off that he caught himself thinking of Boerst. But right now he didn't have a moment to lose, because PAL was dropping farther and farther behind. They had been flying in formation for a good five minutes.

"AMU-twenty-seven to JO-two ditto JO-two Terraluna. It is now twenty hours seven minutes. Insertion parabolic orbit Terraluna to commence at twenty hours ten minutes. Course one hundred eleven..." And he read off the course data from the flight sheet, which, by a feat of acrobatics, he was able to retrieve from overhead. The two JO ships radioed their reply. PAL dropped out of sight, but he could still hear it signaling ever so faintly. Or was that the fly he was hearing?

For a moment the fly seemed to multiply, to be in two different places at once. Pirx rubbed his eyes. It was just as he suspected: There was not one, but two of them. Where did the second one come from?

Now I'm really a goner, he reflected with absolute calm, without a sign of any emotion. He even felt relieved somehow, knowing that it no longer mattered. Either way he was sunk. His thoughts were diverted by a glance at the clock: It was 2010 hours, the time he himself had scheduled for the maneuver, and he had yet to even place his hands on the controls.

The daily grind of training exercises must have taken its toll because without a moment's hesitation he grabbed both control sticks, pressed first the left one and then the right, and all the time kept his eye on the trajectometer. The engine responded with a hollow roar until it gradually tapered off to a whisper. *Ouch!* Something landed on his forehead, just under his visor, and remained stationary. The navigation book! It was blocking his vision, but he couldn't brush it aside without removing his hands from the controls. His earphones were alive and astir as the two flies went about pursuing their love life on the computer. *If only I had a gun on me,* he thought, feeling the navigation book start to flatten his nose with the increase in acceleration. In desperation he began tossing his head around like a madman; he had to be able to see the trajectometer, for crying out loud! Suddenly the book crashed to the floor with a bang—and small wonder: At four-g it must have weighed nearly three kilos. He immediately decelerated to the level required by the maneuver, and at two-g he put the levers on hold. He threw a glance at the

mating flies. They were not the least bit fazed by the acceleration; on the contrary, they looked to be in seventh heaven.

He verified the position of the two ships and again thought of Boerst, picturing to himself how very much the movie star he must have looked. What a jaw that guy had! Not to mention that perfectly straight nose, those steely gray eyes... *You can bet he didn't have to rely on any crib sheet! But come to think of it, so far neither have I...*

He adjusted the automatic reducer to achieve a zero acceleration after eighty-three minutes, as instructed, and then saw something that turned his sweat-absorbent underwear to ice.

Above the dashboard a white panel had come unclamped. Not only that, but it was starting to work its way down, a millimeter at a time. It had probably been loose to begin with, he reasoned, and all the vibrating during the recent yaw maneuvers—Pirx's handling of the ship hadn't exactly been gentle—had loosened the pressure

● Pirx stuck his
legs inside, braced himself
against the metal
housing, scooted down the
flexible chute
without so much as touching
the... rungs.
"Rungs are... for goners." ●

clamps even more. With the acceleration still running at one-point-seven-g, the panel kept inching its way down as if it were being pulled by an invisible thread. Finally it sprang loose altogether, slid down the outer side of the Plexiglas wall, and settled motionlessly on the deck, exposing a set of four gleaming copper high-voltage wires and fuses at the back.

Why all the panic? he thought. *An electrical panel has come loose. So, big deal! A ship can get along without a panel, can't it?*

There were still twenty-seven minutes of accelerated flight to go when it hit him that once the engines were shut down, the panel would become weightless. *Could it do any damage?* he wondered.

What were the flies up to? He followed them with his gaze as they zoomed and buzzed and circled and chased each other around the outside of the blister before landing on the back of the fuse panel. That's when he lost track of them.

He took a reading of the two JO ships on the radarscope: Both were on course. The face of the moon now loomed so large on the front screen that it took up half of it. He recalled how during a series of seleno-

graphic exercises in the Tycho Crater Boerst, with the help of a portable theodolite... *Damn it, what a pro that guy was!* Pirx kept an eye out for Luna Control on the outer slope of Archimedes. It was camouflaged so well among the rocks that it was almost invisible from high altitude, all except for the smooth surface of the landing strip with its approach lights—when in the night zone, that is, and not, as presently, when it was illuminated by the sun. At the moment the base was straddling the crater's shadow line, the contrast with the blinding lunar surface being so intense that it overpowered the weaker approach lights.

That's funny—I don't hear any more buzzing. He glanced sideways and flinched.

One of the flies was sitting and cleaning its wings on the exposed side of the panel, while the other fly was busy courting it. A few millimeters away, its copper terminal gleaming below the spot where the insulation ended, was the nearest cable. All four cables were exposed, about as thick in diameter as a pencil, and all in the one-thousand-volt range, with a contact clearance of seven millimeters. It was just by accident that he knew it was seven. Once, as an exercise, they had torn down the entire circuitry system, and when Pirx couldn't come up with the exact clearance, his instructor had read him off the riot act.

In the meantime, the one fly took time off from its wooing and started venturing out along the live terminal. A harmless enough thing to do—unless, of course, it suddenly got an urge to hop over to the next one, and, judging by the way it sat there, humming, at the very end of the terminal, that's precisely what it intended to do. As if it didn't have room enough in the cabin! Now, Pirx thought, what would happen if it put its front feet on the one wire and kept its hind feet on the other? Well, so what if it did! In the worst case it might cause a short circuit. But then—a fly! Would a fly be big enough to do that? But even if it were, nothing much could happen; there would be a momentary blowout, the circuit breaker would switch off the current, the fly would be electrocuted, and the power would be restored—and goodbye fly! As if in a trance, he kept his eyes fixed on the high-tension box, secretly cherishing the hope that the fly would think better of it. A short circuit was nothing serious, a minor foul-up, but who knows what else might happen...?

Only eight more minutes of gradual deceleration until touchdown. He was still staring at the dial when there was a flash. Then the lights went out. It was a momentary blackout, lasting no more than a fraction of a second. *The fly!* he thought, and he waited with bated breath for the circuit breaker to flip the power back on. It did.

The lights stayed on for a while—dimmer and more orange-brown than white—before the fuse blew a second time. A total blackout. Then the power came on again. Off again. On again. And so it went, back and forth, with the lights burning at only half

their normal amperage. What was wrong? During the brief but regular intervals of light he managed, with considerable squinting and straining of the eyes, to pinpoint the trouble: The insect was trapped between two of the wires, a charred sliver of a corpse that continued to act as a conductor.

Only four minutes left until engine cutoff. Well, that was one load off his mind—the reducer was programmed to shut the engine down automatically. Suddenly an icy chill ran down his spine. How could the kill switch work if the circuit was shorted?

For a second he couldn't recollect whether they operated on the same circuit, whether these were the main fuses for the rocket's entire power supply. Of course, they had to be. But what about the reactor? Surely the reactor must have had its own power network...

The reactor, yes, but not the automatic switch. He knew because he had set it himself. Okay, so now all he had to do was to shut off the power. Or maybe he should just sit back and give it a chance to work on its own.

The engineers had thought of everything—everything except what to do when a fly gets into your cabin, a fuse panel comes unclamped, and you wind up with such a screwy short circuit!

Meanwhile the lights kept shorting out. Something had to be done about it. But what?

Simple. All he had to do was to flip the master switch, located in the floor behind his seat. That would shut off all the main power circuits and trip the emergency system. Then all his worries would be over. *Hmm*, he thought, *not bad the way these buckets are rigged*.

He wondered whether Boerst would have been as quick on his feet. Probably, if not quicker... Yikes, only two minutes left! Not enough time for the maneuver! He sat up. He had clean forgotten about the others.

"AMU-twenty-seven squadron leader Terraluna, calling JO-two ditto JO-two. Reporting short circuit in control room. Will be necessary for me to postpone lunar-insertion maneuver for temporary equatorial orbit... uh... indefinitely. Proceed to execute maneuver at previously designated time. Over."

"JO-two ditto to squadron leader Terraluna. Will commence joint lunar-insertion maneuver for temporary equatorial orbit. You are nineteen minutes away from lunar landing. Good luck. Good luck. Out."

Pirx hardly heard a word because in the meantime he had disconnected the radio-phone cable, the air hose, and another small cable (his straps were already undone). No sooner had he made it to his feet than the kill switch flashed a ruby-red. The cabin sprang briefly out of the dark, only to be plunged back into an orange-brown blur. The engine cutoff had failed. The red signal light kept staring at him from out of the dark, imploringly. A buzzer sounded: the warning signal. The automatic reducer was inoperative. Fighting to keep his bal-

ance, Pirx jumped behind the contour couch.

The master switch was housed in a cassette inserted in the floor. The cassette turned out to be locked. Natch! He tried yanking on the lid; it wouldn't give. The key. Where was the key?

There was no key. He tried forcing the lid again. No luck.

He sprang to his feet and stared blindly into the forward screen, where, its surface no longer silver but an alpine snow-white, there now loomed a gigantic moon. Craters came into view, their long, serrated shadows creeping stealthily along the surface. He could hear the radar altimeter clicking steadily away. *How long has it been operating?* he wondered. Little green digits flashed in the dark, and he read off his present altitude: twenty-one thousand kilometers.

The ship was now flying a perfectly straight course, gaining velocity as the residual acceleration reached point-two-g and the moon's gravitational pull grew stronger. What to do? What to do! He rushed back to the cassette and kicked it. The metal casing refused to budge.

Hold everything! My Gawd, how could I have been so stupid! All he had to do was to find a way to reach the other side of the blister. And there was a way! Near the exit, at the point where the blister narrowed tunnel-like to form a funnel ending with the air lock, there was a special lever painted a bright enamel red, beneath a plate that read FOR CONTROL SYSTEMS EMERGENCY ONLY. One switch of the lever was all that was needed to raise the glass cocoon a meter off the ground, leaving just enough clearance underneath. Once on the other side, all he had to do was to clear the lines, and with a piece of insulation...

He was at the handle in less than no time.

You moron! he thought, and he grabbed the metal handle and yanked until his shoulder joint cracked. The lever, its metal rod glistening with oil, was fully extended, but the blister hadn't wiggled an inch. In stunned bewilderment, he stood staring at the glass bubble, at the video screens ablaze with moonlight, at the blinking light overhead... He jerked on the lever again, even though it was out as far as it would go. Nothing.

The key! The key to the cassette! He fell flat on the floor and searched under the seat. There was nothing to be seen except the crib sheet.

The lights blinked; the circuit breaker switched. Now when the lights dimmed, the moonlight cast everything in a stark, skeleton-bone white.

It's all over, he thought. Should he fire the ejection rocket and bail out in the encapsulated seat? No, it wouldn't work; without any atmospheric drag, the parachute wouldn't brake. *Help!* he wanted to yell, but there was no one to whom he could call in distress. He was all alone. What to do? There just *had* to be a way out!

He scrambled back to the emergency

lever and almost tore his arm out of its socket, now so frantic he wanted to cry. It was all so dumb... Where was the key? And why the malfunction in the emergency lever? The altimeter. With one sweeping glance, he read off the displays: ninety-five hundred kilometers. The saw-toothed ridge of Timocharis now stood out against the luminous background in sharp relief. He even had visions of where his ship was about to drill a hole in the pumice-covered rock. A loud crash, a blinding explosion, and...

During a brief interval of light, his frantically shifting gaze fell on the set of four copper wires. The little black speck spanning the cables—all that was left of the incinerated fly—was clearly discernible, even from a distance. Sticking out his neck and shoulder like a soccer goalie about to make a flying save, Pirx lunged forward with all his weight. He was knocked almost unconscious by the force of the collision. He bounced off the blister's Plexiglas wall like an inflated inner tube and crumpled to the floor. The outer shell did not so much as jiggle. Struggling to his feet, panting, with a bleeding mouth, he got ready to make another flying lunge at the Plexiglas wall.

That's when he happened to glance down.

The manual override. Designed to give rapid, full-thrust acceleration in the ten-g range. Operated by direct mechanical control and capable of providing an emergency thrust lasting less than a second.

But the greater the rate of acceleration, he suddenly realized, the faster his descent to the lunar surface. Or would it be? No, it would do just the opposite; it would have a braking effect. But wouldn't the reaction be too short to act as a brake? The braking had to be continuous. So much for the override. Or was it?

He made a dive for the control stick, grabbing it on his way down, and pulled for all he was worth. Without the contour couch to cushion his impact, he could have sworn all his bones had been fractured when he hit the deck. Another pull on the stick, another powerful lurch. This time he landed on his head, and if it hadn't been for his helmet's foam-rubber liner, his skull would have been shattered.

The fuse panel started sizzling, the blinking suddenly stopped, and a soft and steady electric light lit up the interior of the cabin.

The two bursts of acceleration, fired in quick succession by manual control, had been enough to dislodge the tiny sliver of carbon from between the wires, thus eliminating the short circuit once and for all. With the salty taste of blood in his mouth, Pirx made a diving leap for the couch, but, instead of landing in it, he sailed high up over the back and rammed his head into the ceiling, the blow softened only somewhat by his helmet.

Just as he was getting set to leap into the air, the now-activated kill switch cut off the rocket, and the last trace of gravitation dis-

appeared. Propelled by its own momentum, the spacecraft was falling straight toward the rocky ruins of Timocharis.

The altimeter showed eighteen hundred kilometers to lunar surface. Would he be able to brake in time? Impossible—not at a velocity of forty-five kilometers per second. He would have to pull out of the nose dive by describing a steep turn. There was no other way.

Firing his pitch rockets, he accelerated to two, three, four gs. Not enough! Not nearly enough!

As he applied full thrust for the pullout recovery, the lunar surface, shimmering quicksilverlike on the video screen, and so like a permanent fixture until now, began to quiver and slowly subside, his contour couch squeaking under the increasing pressure of his body. The ship was going into a steep arc directly over the lunar surface—an arc with a radius large enough to compensate for the tremendous velocity. The control stick was pushed to the limit. Pressed against the spongy backrest, with his space suit not connected to the air compressor, he could feel the air being squeezed out of his lungs and his ribs being bent inward. He began seeing gray spots and waited for the blackout, his eyes riveted to the radar altimeter, which kept grinding out one set of digits after another: nine hundred ninety ... nine hundred ... eight hundred forty ... seven hundred sixty ...

His eyesight began to dim—the five gs were beginning to exact their toll—but he remained conscious. He lay there, partially blind, his fingers tightly gripping the controls, and felt the seat's foam-rubber cushion give way under the g force. Somehow he couldn't quite bring himself to believe that he was done for. Unable to move his lips, he started counting mentally in the dark, slowly and deliberately: *Twenty-one ... twenty-two ... twenty-three ... twenty-four ...*

At the count of fifty, it crossed his mind that if there were to be an impact, it would have to be now. Even so, he kept his hands on the controls. It was starting to get to him now—the suffocating sensation in the chest, the ringing in the ears, a throat all clogged with blood, the reddish-black in the eyes. He'd reached his physical limits.

His fingers relaxed their grip, and the control stick slid back of its own. He saw nothing, heard nothing. By degrees the darkness began to lift and turned gray, and breathing became easier. He tried opening his eyes, only to discover that they had been open the whole time—his eyelids were completely dried out.

He sat up.

The gravimeter showed two gs; on the forward screen, nothing but star-embellished blackness. Not a sign of the moon. What had happened to it?

It was there, all right—below him. He had pulled out of his deadly nose dive and was now cruising up and away with a diminishing escape velocity. He wondered how

close he had shaved it. The altimeter must have recorded the exact amount of clearance, but somehow he was in no mood to take a readout. Suddenly the alarm signal stopped. *My Gawd, it has been on the whole time! A big help that was! Why not hang a church bell from the ceiling? If you're headed for the cemetery, then at least let a guy go out in style!* There was another buzzing noise, this time very faint. The other fly! It was alive, the bastard! Alive and buzzing the blister's ceiling. Suddenly he had an awful taste in his mouth, a taste similar to that of coarse canvas ... The safety belt. He had been munching on it absentmindedly the whole time.

He fastened the safety belt and grabbed hold of the controls; he still had to steer the ship back onto the assigned orbit. The two JO ships were nowhere in sight, which came as no surprise. Even so, he had to complete the mission and report to Luna Navigation. Or should he report first to Luna Control—because of the malfunction?

*•The fly ... embarked
on a ... promenade around the
computer's micro-
phone. Pirx had run out of
things to throw;
the flight book was still
hovering overhead,
lithely flapping its pages. •*

Damned if he knew. Or maybe he should just keep quiet. No way! The moment he touched down, they would spot the blood—which, as he now noticed for the first time, was splattered all over the ceiling. Besides, the on-board flight recorder would have the whole story on tape—the way the circuit breaker went berserk, the malfunction in the emergency lever ... *Boy, a swell piece of machinery these sports give us! They might as well send us up in a coffin!*

Okay, so he'd report it. But where? Then he had a brainstorm. He leaned forward, loosened his shoulder strap, and groped under the seat for the crib sheet. Why the hell not? Now's when it could really come in handy.

At that instant he heard something creak behind him, as if a door were being opened.

A door? Behind him? He knew perfectly well there was no door behind him. But even if he'd wanted to, he couldn't have turned around because of the straps. A streak of light fell across the screens, wiping out the stars still visible on them, and the next thing he heard was the CO's soft and subdued voice: "Cadet Pirx."

He made an attempt to get up, was restrained by the straps, and fell back against the seat, convinced that he was hallucinating. Out of nowhere the CO suddenly appeared in the passage separating the glass shell from the rest of the cabin. He stood before him in his gray uniform, fixed him with his gentle gray eyes, and smiled. Pirx was altogether confused.

The moment the glass bubble went up, Pirx automatically started undoing his straps, then rose to his feet. The video screens behind the CO went blank.

"A good performance, Pirx," the CO said. "Quite good."

Pirx was still dumbfounded. Then, as he was standing at attention in front of the CO, he did something that was strictly against the rules: He turned his head around, twisting it as far as his partially inflated neck dam would let him.

To his amazement, the entire access tunnel had been dismantled, hatchway and all, making it look as if the rocket ship had broken in half. In the evening light he made out the catwalk, where a group of people were now standing—the cable railings, the ceiling girders ... Pirx stared at the CO with a gaping mouth.

"Come along, son," said the CO, who reached out and shook Pirx's hand firmly. "On behalf of Flight Command, I commend you and ... offer you my personal apology. Yes, it's ... only right. Now come along. You can clean up at my place."

The CO started for the exit, with Pirx trailing his footsteps, still a little stiff and wobbly on his feet. It was chilly outside. A breeze was blowing through the sliding panel in the ceiling. Both ships were parked in the exact same place as before. Attached to the nose of each were several long and thick cables, droopingly suspended in space. They had not been there before.

His instructor, who was among those waiting on the catwalk, made a remark, which Pirx had trouble hearing through his helmet.

"What?" he instinctively blurted out.

"The air! Let the air out of your suit!"

"Oh, the air ..."

He pressed the valve, and the air made a hissing sound as it was released. From where he stood on the catwalk, he could make out the two men in white smocks waiting behind the railing. His rocket ship looked as if it had a fractured beak. At first he felt only a strange apathy, which turned to amazement, then disillusionment, and finally anger—pure and unmitigated anger.

They were opening the hatch of the other ship. The CO was standing on the catwalk, listening to something the men in white smocks were telling him.

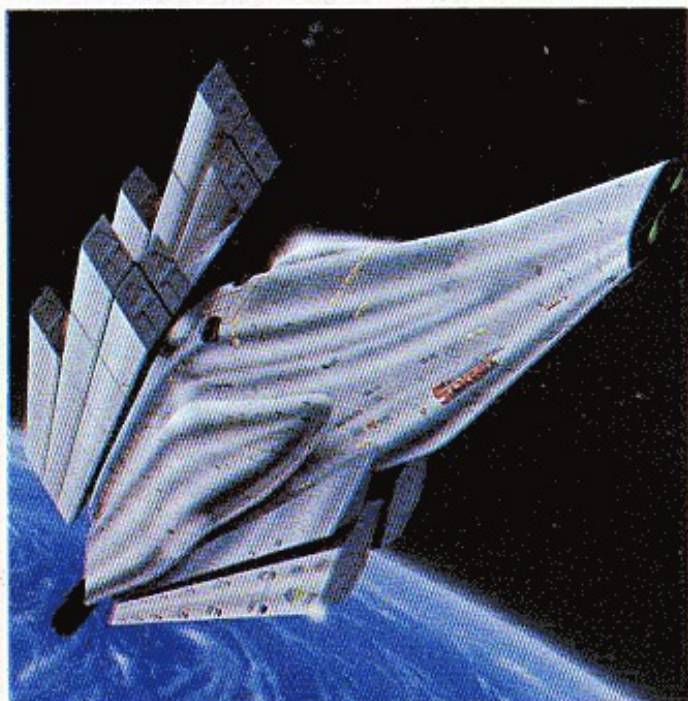
A faint banging noise could be heard coming from inside.

Then, from out of the cabin staggered a writhing hulk of a man in a brown uniform, his helmetless head bobbing around like a blurry blotch, his face contorted in a mute shriek ...

Pirx's knees buckled. ∞

*Strange experiences
among the alien races of Magellan's Cloud*

TOUR OF THE UNIVERSE

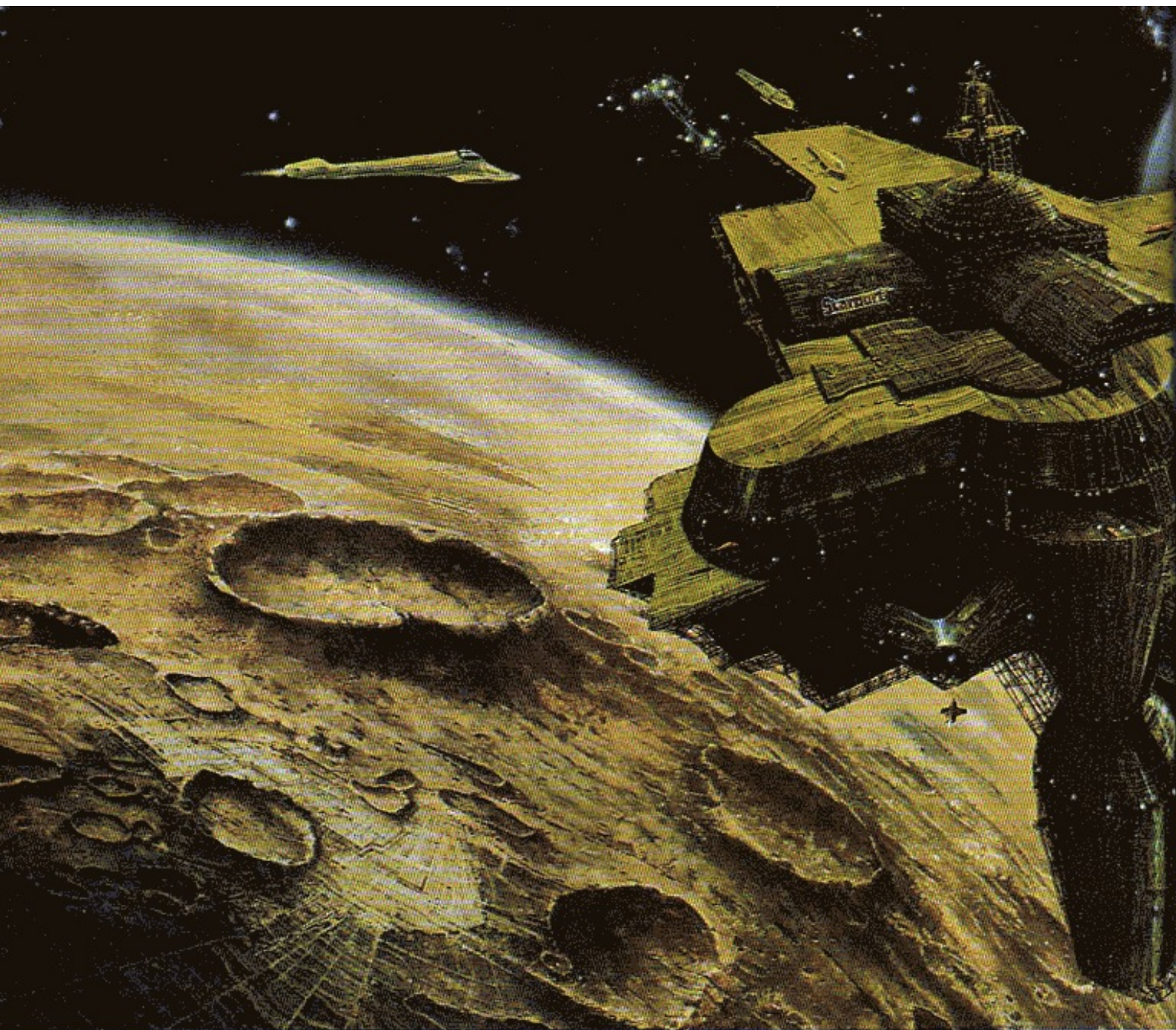


Guess what? Caroline and I just won a tour of the universe! We'll see Dykstra's World, where mu-coid parasites communicate with their host through dreams. And Addler's Planet, where time oscillates across a two-hour span, making everyone late for work. We'll also see the Magellan Singularity, where the space/time distortion can do strange things to cosmic voyagers. Good-bye, Ring City (right); hello, Universe.

PAINTINGS BY
ROBERT HOLDSTOCK AND MALCOLM EDWARDS



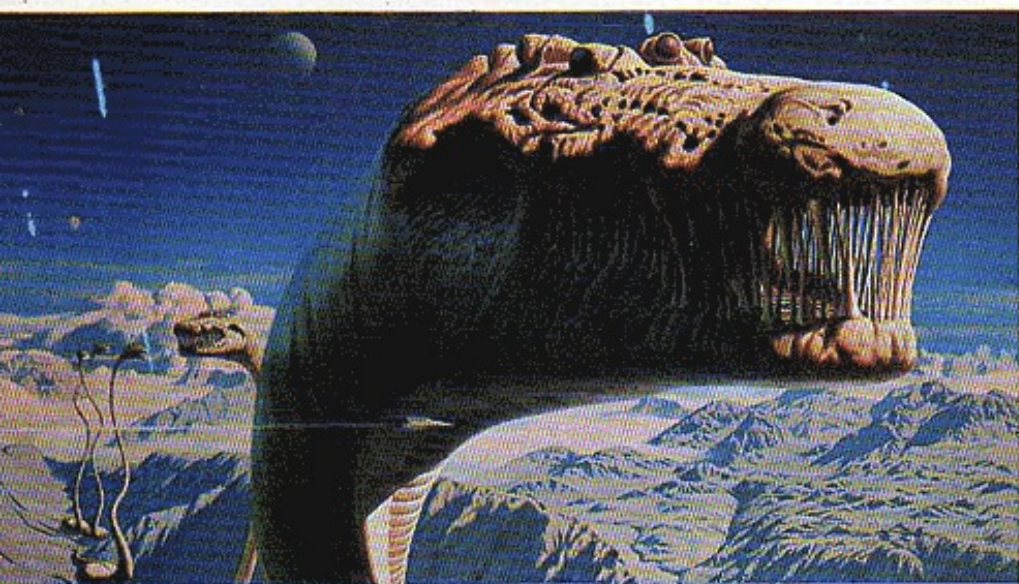




We got off the Jupiter shuttle on Ganymede and were taken to the interstellar terminal (left). On the lower far right you can see the Stargate Magellan, parked on the Singularity that makes our trip to another galaxy possible. Some ruins we visited on Pluto (lower near right) are supposed to have been left by a people so alien they didn't possess the numbers 9 through 72. In the Magellan System we visited two arachnoid life forms that gave us some interesting tips on double-entry book-keeping. The creature between them is Caroline. When we passed through the Singularity, her molecular-reassembly process went hay-wire. Our ship's doctors say she'll snap out of it after our next space/time jump. You'd think they would have worked out the kinks by now.

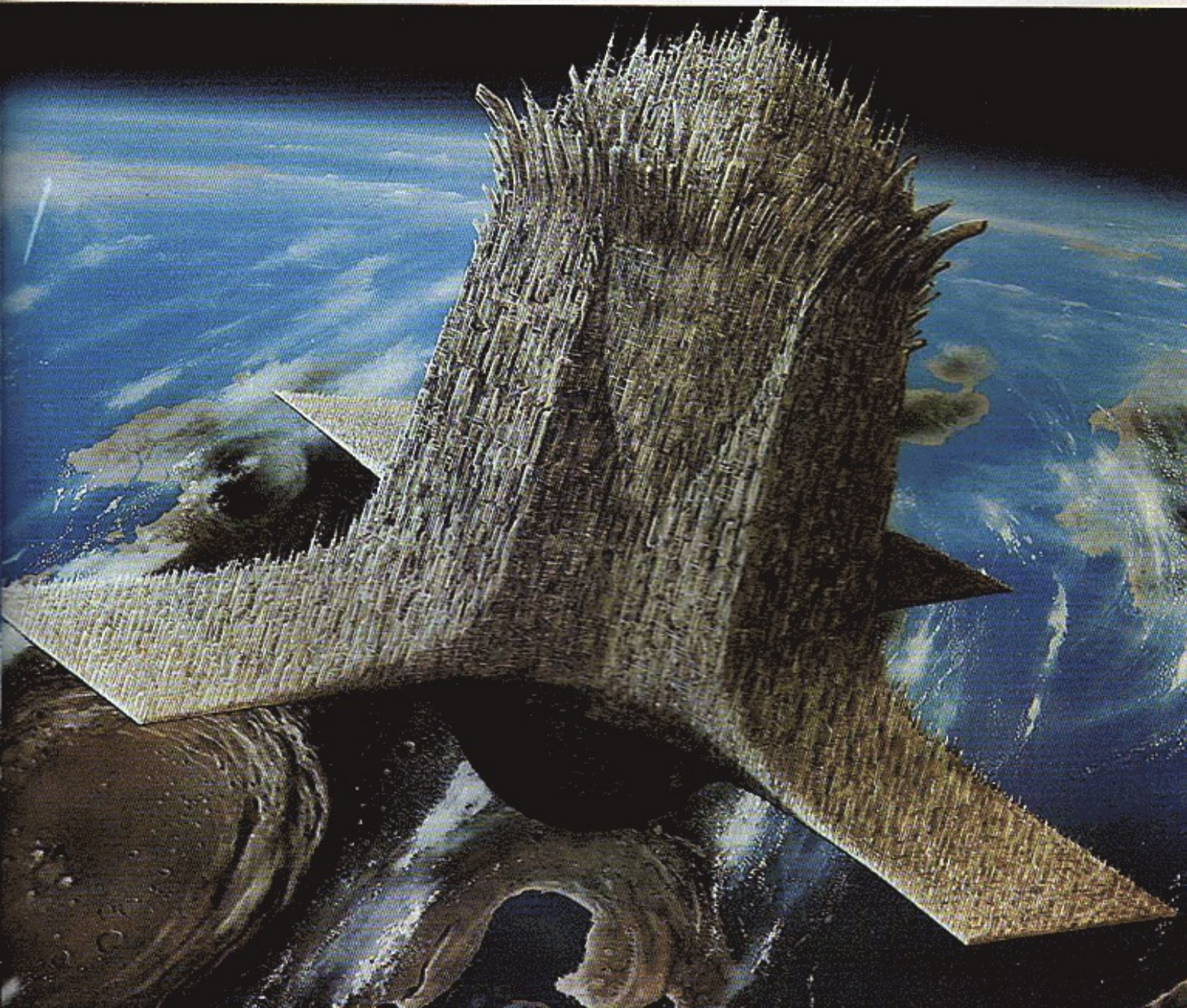
●The association of Pluto's most ancient ruins with these long-vanished aliens is dubious.●

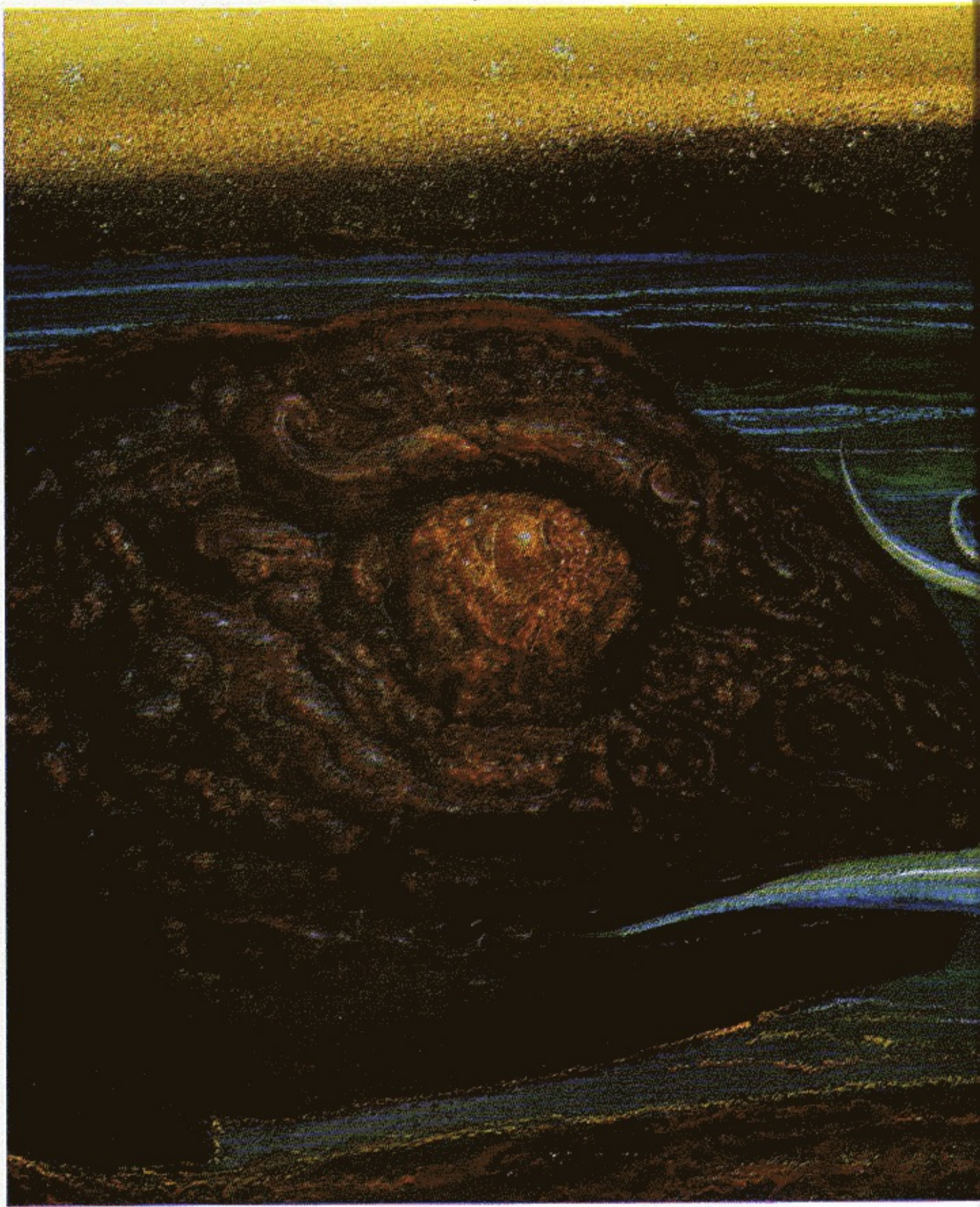




•The vibrating Prismoids of Annax IV are the most enigmatic of known intelligent life anywhere.•

On our next stop we met the carnivorous Behemoths of Orionis Delta III (far left). Intelligent and sulky, the Behemoths would be extremely dangerous if their teeth hadn't grown together in an evolutionary development whose meaning is still not entirely clear. On the lower left is an artist's rendering of a coffee break during the Battle of Shiva's Rift. At the upper near left are some of the intelligent crystal forms of Annax IV, emitting short bursts of light (their way of clearing their throats). Finally, on the right is a complex symbiotic multiple organism from the Pliax System. Caroline is visible as one of the spires in its upper left-hand corner. That last space/time jump was too much for her. The doctors advised her to stay put. I'll miss her on the trip back to Earth.∞







A HISS OF DRAGON

*His gene tinkering turned
the berry gatherers into
fire-breathing behemoths.*

BY GREGORY BENFORD
& MARC LAIDLAW

Incoming Dragon!" Leopold yelled, and ducked to the left. I went right.

Dragons come in slow and easy. A blimp with wings, this one settled down like a wrinkled brown sky falling. I scrambled over boulders, trying to be inconspicuous and fast at the same time. It didn't seem like a promising beginning for a new job.

Leopold and I had been working on the ledge in front of the Dragon's Lair, stacking berry pods. This Dragon must have flown toward its Lair from the other side of the mountain spire, so our radio tag on him didn't transmit through all the rock. Usually they're not so direct. Most Dragons circle their Lairs a few times, checking for scavengers and egg stealers. If they don't circle, they're usually too tired. And when they're tired, they're irritable. Something told me I didn't want to be within reach of this one's throat flame.

I dropped my berrybag rig and went down the rocks feet first. The boulders were slippery with green moss for about 20 meters below the ledge, so I slid down on them. I tried to keep the falls to under four meters and banged my butt when I missed. I could hear Leopold knocking loose rocks on the other side, moving down toward where our skimmer was parked.

PAINTING BY ERNST FUCHS

A shadow fell over me, blotting out Beta's big yellow disk. The brown bag above thrashed its wings and gave a trumpeting shriek. It had caught sight of the berry bags and knew something was up. Most likely, with its weak eyes, the Dragon thought the bags were eggsters—off season, but what do Dragons know about seasons?—and would attack them. That was the optimistic theory. The pessimistic one was that the Dragon had seen one of us. I smacked painfully into a splintered boulder and glanced up. Its underbelly was heaving, turning purple: anger. Not a reassuring sign. Eggsters don't bother Dragons that much.

Then its wings fanned the air, backwards. It drifted off the ledge, hovering. The long neck snaked around, and two nearsighted eyes sought mine. The nose expanded, catching my scent. The Dragon hissed triumphantly.

Our skimmer was set for a fast takeoff. But it was 200 meters down, on the only wide spot we could find. I made a megaphone of my hands and shouted into the thin mountain mist, "Leopold! Grab air!"

I jumped down to a long boulder that jutted into space. Below and a little to the left I could make out the skimmer's shiny wings through the shifting green fog. I sucked in a breath and ran off the end of the boulder.

Dragons are clumsy at level flight, but they can drop like a brick. The only way to beat this one down to the skimmer was by falling most of the way.

I banked down, arms out. Our gravity is only a third of Earth normal. Even when falling, you have time to think things over. I can do the calculations fast enough—it came out to nine seconds—but getting the count right with a Dragon on your tail is another matter. I ticked the seconds off and then popped the chute. It fanned and filled. The skimmer came rushing up, wind whipped my face. Then my harness jerked me to a halt. I drifted down. I thumped the release and fell free. Above me, a trumpeting bellow. Something was coming in at four o'clock and I turned, snatching for my blaser. Could it be that fast? But it was Leopold, on chute. I sprinted for the skimmer. It was pointed along the best out-bound wind, flaps already down, a standard precaution. I belted in, sliding my feet into the pedals. I caught a dank, foul reek of Dragon. More high shrieking, closer. Leopold came running up, panting. He wriggled into the rear seat. A thumping of wings. A ceiling of wrinkled leather. Something hissing overhead.

Dragons don't fly, they float. They have a big green hydrogen-filled dome on their backs to give them lift. They make the hydrogen in their stomachs and can dive quickly by venting it out the ass. This one was farting and falling as we zoomed away. I banked, turned to get a look at the huffing brown mountain hooting its anger at us, and grinned.

"I take back what I said this morning,"

Leopold gasped. "You'll draw full wages and commissions, from the start."

I didn't say anything. I'd just noticed that somewhere back there I had pissed my boots full.

I covered it pretty well back at the strip. I twisted out of the skimmer and slipped into the maintenance bay. I had extra clothes in my bag, so I slipped on some fresh socks and thongs.

When I was sure I smelled approximately human, I tromped back out to Leopold. I was damned if I would let my morning's success be blotted out by an embarrassing accident. It was a hirer's market these days. My training at crop dusting out in the flat farmlands had given me an edge over the other guys who had applied. I was determined to hang on to this job.

Leopold was the guy who "invented" the Dragons, five years ago. He took a life form native to Lex, the bloats, and tinkered with their DNA. Bloats are balloonlike and nasty.

*!I made those Dragons
out of mean sons of bitches—
blimps with teeth
is what they were. It gets
tricky when you
mess with the life cycle of
something that's
already that unstable.!*

Leopold made them bigger, tougher, and spliced in a lust for thistleberries that makes Dragons hoard them compulsively. It had been a brilliant job of bioengineering. The Dragons gathered thistleberries, and Leopold stole them from the Lairs.

Thistleberries are a luxury good, high in protein, and delicious. The market for them might collapse if Lex's economy got worse—the copper seams over in Bahinin had run out last month. This was nearly the only good flying job left. More than anything else, I wanted to keep flying. And not as a crop duster. Clod-grubber work is a pain.

Leopold was leaning against his skimmer, a little pale, watching his men husk thistleberries. His thigh muscles were still thick; he was clearly an airman by ancestry, but he looked tired.

"Goddamn," he said. "I can't figure it out, kid. The Dragons are hauling in more berries than normal. We can't get into the Lairs, though. You'd think it was mating season around here, the way they're attacking my men."

"Mating season? When's that?"

"Oh, in about another six months, when the puffbushes bloom in the treetops. The

pollen sets off the mating urges in Dragons—steps up their harvest, but it also makes 'em meaner."

"Great," I said. "I'm allergic to puffbush pollen. I'll have to fight off Dragons with running eyes and a stuffy nose."

Leopold shook his head absently; he hadn't heard me. "I can't understand it—there's nothing wrong with my Dragon designs."

"Seems to me you could have toned down the behavior plexes," I said. "Calm them down a bit—I mean, they've outgrown their competition to the point that they don't even need to be mean anymore. They don't browse much as it is. . . nobody's going to bother them."

"No way—there's just not the money for it, Drake. Look, I'm operating on the margin here. My five-year rights to the genetic patents just ran out, and now I'm in competition with Kwalan Rhiang, who owns the other half of the forest. Besides, you think gene splicing is easy?"

"Still, if they can bioengineer humans . . . I mean, we were beefed up for strength and oxy burning nearly a thousand years ago."

"But we weren't blown up to five times the size of our progenitors, Drake. I made those Dragons out of mean sons of bitches—blimps with teeth is what they were. It gets tricky when you mess with the life cycles of something that's already that unstable. You just don't understand what's involved here."

I nodded. "I'm no bioengineer—granted."

He looked at me and grinned, a spreading warm grin on his deeply lined face. "Yeah, Drake, but you're good at what you do—really good. What happened today, well, I'm getting too old for that sort of thing, and it's happening more and more often. If you hadn't been there I'd probably be stewing in that Dragon's stomach right now—skimmer and all."

I shrugged. That gave me a chance to roll the slabs of muscle in my shoulders, neck, and pectorals—a subtle advertisement that I had enough to keep a skimmer aloft for hours.

"So," he continued, "I'm giving you full pilot rank. The skimmer's yours. You can fly it home tonight, on the condition that you meet me at the Angis Tavern for a drink later on. And bring your girl Evelaine, too, if you want."

"It's a deal, Leopold. See you there."

I whistled like a dungwarbler all the way home, pedaling my new skimmer over the treetops toward the city. I nearly wrapped myself in a floating thicket of windbrambles, but not even this could destroy my good mood.

I didn't notice any Dragons roaming around, though I saw that the treetops had been plucked of their berries and then scorched. Leopold had at least had the foresight, when he was gene tinkering, to provide for the thistleberries' constant re-

plenishment. He gave the Dragons a throat flame to singe the treetops with, which makes the berries regrow quickly. A nice touch.

It would have been simpler, of course, to have men harvest the thistleberries themselves, but that never worked out, economically. Thistleberries grow on top of virtually unclimbable thorn trees, where you can't even maneuver a skimmer without great difficulty. And if a man fell to the ground . . . well, if it's on the ground, it has spines, that's the rule on Lex. There's nothing soft to fall on down there. Sky life is more complex than ground life. You can actually do something useful with sky life—namely, bioengineering. Lex may be a low-metal world—which means low-technology—but our bioengineers are the best.

A clapping sound, to the left. I stopped whistling. Down through the greenish haze I could see a dark form coming in over the treetops, its wide rubbery wings slapping together at the top of each stroke. A smackwing. Good meat, spicy and moist. But hard to catch. Evelaine and I had good news to celebrate tonight; I decided to bring her home smackwing for dinner. I took the skimmer down in the path of the smackwing, meanwhile slipping my blaser from its holster.

The trick to hunting in the air is to get beneath your prey so that you can grab it while it falls, but this smackwing was flying too low. I headed in fast, hoping to frighten it into rising above me, but it was no use. The smackwing saw me, red eyes rolling. It missed a beat in its flapping and dived toward the treetops. At that instant a snagger shot into view from the topmost branches, rising with a low farting sound. The smackwing spotted this blimplike thing that had leaped into its path but apparently didn't think it too threatening. It swerved about a meter under the bobbing creature—

And stopped flat, in mid-air.

I laughed aloud, sheathing my blaser. The snagger had won his meal like a real hunter.

Beneath the snagger's wide blimplike body was a dangling sheet of transparent sticky material. The smackwing struggled in the moist folds as the snagger drew the sheet upward. To the unwary smackwing that clear sheet must have been invisible until the instant he flew into it.

Within another minute, as I pedaled past the spot, the snagger had entirely engulfed the smackwing and was unrolling its sticky sheet as it drifted back into the treetops. Pale yellow eyes considered me and rejected the notion of me as food. A ponderous predator, wise with years.

I flew into the spired city: Kalatin.

I parked on the deck of our apartment building, high above the jumbled wooden buildings of the city. Now that my interview had been successful, we'd be able to stay in Kalatin, though I hoped we could find a better apartment. This one was as old as the city—which in turn had been around for

a great deal of the 1200 years humans had been on Lex. As the wood of the lower stories rotted, and as the building crumbled away, new quarters were just built on top of it and settled into place. Someday this city would be an archaeologist's dream. In the meantime, it was an inhabitant's nightmare.

Five minutes later, having negotiated several treacherous ladders and a splintering skinny pole into the depths of the old building, I crept quietly to the wooden door of my apartment and let myself in, clutching the mudskater steaks that I'd picked up on the way home. It was dark and cramped inside, the smell of rubbed wood strong. I could hear Evelaine moving around in the kitchen, so I sneaked to the doorway and looked in. She was turned away, chopping thistleberries with a thorn-knife.

I grabbed her, throwing the steaks into the kitchen, and kissed her.

"Got the job, Evey!" I said. "Leopold took me out himself and I ended up saving his—"

"It's you!" She covered her nose, squirming away from me. "What is that smell, Drake?"

"Smell?"

"Like something died. It's all over you."

I remembered the afternoon's events. It was either the smell of Dragon, which I'd got from scrambling around in a Lair, or that of urine. I played it safe and said, "I think it's Dragon."

"Well take it somewhere else. I'm cooking dinner."

"I'll hop in the cyclo. You can cook up the steaks I brought, then we're going out to celebrate."

The Angis Tavern is no skiff joint, good for a stale senso on the way home from work. It's the best. The Angis is a vast old place, perched on a pyramid of rock. Orange fog nestles at the base, a misty collar separating it from the jumble of the city below.

Evelaine pedaled the skimmer with me, having trouble in her gown. We made a wobbly landing on the rickety side deck. It would've been easier to coast down to the city, where there was more room for a glide approach, but that's pointless. There are thick cactus and thornbushes around the Angis base, hard to negotiate at night. In the old days it kept away predators; now it keeps away the riffraff.

But not completely: two beggars accosted us as we dismounted, offering to shine up the skimmer's aluminum skin. I growled convincingly at them, and they skittered away. The Angis is so big, so full of crannies to hide out in, they can't keep it clear of beggars, I guess.

We went in a balcony entrance. Fat balloons nudged against the ceiling, ten meters overhead, dangling their cords. I snagged one and stepped off into space. Evelaine hooked it as I fell. We rode it down, past alcoves set in the rock walls. Well—



dressed patrons nodded as we eased down, the balloon following. The Angis is a spire, broadening gradually as we descended. Phosphors cast creamy glows on the tables set into the walls. I spotted Leopold sprawled in a webbing, two empty tankards lying discarded underneath.

"You're late," he called. We stepped off onto his ledge. Our balloons, released, shot back to the roof.

"You didn't set a time. Evelaine, Leopold." Nods, introductory phrases.

"It seems quite crowded here tonight," Evelaine murmured. A plausible social remark, except she'd never been to an inn of this class before.

Leopold shrugged. "Hard times mean full taverns. Booze or sensos or tinglers—pick your poison."

Evelaine has the directness of a country girl and knows her own limitations; she stuck to a mild tingler. Service was running slow, so I went to log our orders. I slid down a shinny pole to the first bar level. Mice zipped by me, eating up tablescraps left by the patrons; it saves on labor. Amid the jam and babble I placed our order with a steward and turned to go back.

"You looking for work?" a thick voice said. I glanced at its owner. "No." The man was big, swarthy, and sure of himself.

"Thought you wanted Dragon work." His eyes had a look of distant amusement.

"How'd you know that?" I wasn't known in the city.

"Friends told me."

"Leopold hired me today."

"So I hear. I'll top whatever he's paying."

"I didn't think business was that good."

"It's going to get better. Much better, once Leopold's out of the action. A monopoly can always sell goods at a higher price. You can start tomorrow."

So this was Kwalan Rhiang. "No thanks. I'm signed up." Actually, I hadn't signed anything, but there was something about this man I didn't like. Maybe the way he was so sure I'd work for him.

"Flying for Leopold is dangerous. He doesn't know what he's doing."

"See you around," I said. A senso was starting in a nearby booth. I took advantage of it to step into the expanding blue cloud, so Rhiang couldn't follow and see where we were sitting. I got a lifting, bright sensation of pleasure, and then I was out of the misty confusion, moving away among the packed crowd.

I saw them on the stairway. They were picking their way down it delicately. I thought they were deformed, but the funny tight clothes gave them away. Offworlders, here for the flying. That was the only reason anybody came to Lex. We're still the only place men can seriously fly longer than a few minutes. Even so, our lack of machines keeps most offworlders away; they like it easy, everything done for them. I watched them pick their way down the stairs, thinking that if the depression got worse, offworlders would be able to hire servants here, even though it was illegal. It could

come to that.

They were short as children but heavysset, with narrow chests and skinny limbs. Spindly people, unaugmented for Lex oxy levels. But men like that had colonized here long ago, paying for it in reduced lifetimes. I felt as though I was watching my own ancestors.

Lex shouldn't have any oxy at all, by the usual rules of planetary evolution. It's a small planet, 0.21 Earth masses, a third gee of gravity. Rules of thumb say we shouldn't have any atmosphere to speak of. But our sun, Beta, is a K-type star, redder than Sol. Beta doesn't heat our upper atmosphere very much with ultraviolet, so we retain gasses. Even then, Lex would be airless except for accidents of birth. It started out with a dense cloak of gas, just as Earth did. But dim old Beta didn't blow the atmosphere away, and there wasn't enough compressional heating by Lex itself to boil away the gasses. So they stuck around, shrouding the planet, causing

*I looked into the
Lair again. One of the Dragons
was prodding at the
other, making low, whuffling
sounds. . . . The other
Dragon wheeled and headed
for the entrance . . .
and I saw my chance.*

faster erosion than on Earth. The winds moved dust horizontally, exposing crustal rock. That upset the isostatic balance in the surface, and split open faults. Volcanoes poked up. They belched water and gas onto the surface, keeping the atmosphere dense. So Lex ended up with low gravity and a thick atmosphere. Fine, except that Beta's wan light also never pushed many heavy elements out this far, so Lex is metal-poor. Without iron and the rest you can't build machines, and without technology you're a backwater. You sell your tourist attraction—flying—and hope for the best.

One of the offworlders came up to me and said, "You got any sparkers in this place?"

I shook my head. Maybe he didn't know that getting a sendup by tying your frontal lobes into an animal's is illegal here. Maybe he didn't care. Ancestor or not, he just looked like a misshapen dwarf to me, and I walked away.

Evelaine was describing life in the flatlands when I got back. Leopold was rapt, the worry lines in his face nearly gone. Evelaine does that to people. She's natural and straightforward, so she was telling him

right out that she wasn't much impressed with city life. "Farmlands are quiet and restful. Everybody has a job," she murmured. "You're right that getting around is harder—but we can glide in the updrafts, in summer. It's heaven."

"Speaking of the farmlands," I said, "an old friend of mine came out here five years ago. He wanted in on your operations."

"I was hiring like crazy five years ago. What was his name?"

"Lorn Kramer. Great pilot."

Leopold shook his head. "Can't remember. He's not with me now, anyway. Maybe Rhiang got him."

Our drinks arrived. The steward was bribable, though—Rhiang was right behind him.

"You haven't answered my 'gram,'" Rhiang said directly to Leopold, ignoring us. I guess he didn't figure I was worth any more time.

"Didn't need to," Leopold said tersely.

"Sell out. I'll give you a good price." Rhiang casually sank his massive flank on our table edge. "You're getting too old."

Something flickered in Leopold's eyes; he said nothing.

"Talk is," Rhiang went on mildly, "market's falling."

"Maybe," Leopold said. "What you been getting for a kilo?"

"Not saying."

"Tight lips and narrow minds go together."

Rhiang stood, his barrel chest bulging. "You could use a little instruction in politeness."

"From you?" Leopold chuckled. "You paid off that patent clerk to release my gene configs early. Was that polite?"

Rhiang shrugged. "That's the past. The present reality is that there may be an oversupply of thistleberries. Market isn't big enough for two big operations like ours. There's too much—"

"Too much of you, that's my problem. Lift off, Rhiang."

To my surprise, he did. He nodded to me, ignored Evelaine, and gave Leopold a look of contempt. Then he was gone.

I heard them first. We were taking one of the outside walks that corkscrew around the Angis spire, gawking at the phosphored streets below. A stone slide clattered behind us. I saw two men duck behind a jutting ledge. One of them had something in his hand that glittered.

"You're jumpy, Drake," Evelaine said.

"Maybe." It occurred to me that if we went over the edge of this spire, hundreds of meters into the thorn scrabble below, it would be very convenient for Rhiang. "Let's move on."

Leopold glanced at me, then back at the inky shadows. We strolled along the trail of volcanic rock, part of the natural formation that made the spire. Rough black pebbles slipped underfoot. In the distant star-flecked night, skylight called and boomed.

We passed under a phosphor. At the next turn Leopold looked back and said, "I saw

one of them. Rhiang's right-hand man."

We hurried away. I wished for a pair of wings to get us off this place. Evelaine understood instantly that this was serious. "There's a split in the trail ahead," Leopold said. "If they follow, we'll know . . ." He didn't finish.

We turned. They followed. "I think I know a way to slow them down," I said. Leopold looked at me. We were trying to avoid slipping in the darkness and yet make good time. "Collect some of these obsidian frags," I said.

We got a bundle of them together. "Go on up ahead," I said. We were on a narrow ledge. I sank back into the shadows and waited. The two men appeared. Before they noticed me I threw the obsidian high into the air. In low gravity it takes a long time for them to come back down. In the darkness the two men couldn't see them coming.

I stepped out into the wan light. "Hey!" I yelled to them. They stopped, precisely where I thought they would. "What's going on?" I said, to stall.

The biggest one produced a knife. "This."

The first rock hit, coming down from over a hundred meters above. It slammed into the boulder next to him. Then three more crashed down, striking the big one in the shoulder, braining the second. They both crumpled.

I turned and hurried along the path. If they'd seen me throw they'd have had time to dodge. It was an old schoolboy trick, but it worked.

The implications, though, were sobering. If Rhiang felt this way, my new job might not last long.

I was bagging berries in the cavernous Paramount Lair when the warning buzzer in my pocket went off. A Dragon was coming in. I still had time, but not much. I decided to finish this particular bag rather than abandon the bagging-pistol. The last bit of fluid sprayed over the heap of berries and began to congeal instantly, its tremendously high surface tension drawing it around the irregular pile and sealing perfectly. I holstered the gun, leaving the bag for later. I turned—

A slow flapping boom. Outside, a wrinkled brown wall.

Well, I'd fooled around long enough—now I dived for safety. The Dragon's Lair was carpeted with a thick collection of nesting materials. None were very pleasant to burrow through, but I didn't have any choice. Behind me I could hear the Dragon moving around; if I didn't move out of his way in a hurry I might get stepped on. The emergency chute on my back tangled in a branch, just as the stench in the Lair intensified. I hurried out of it and went on. I'd just have to be sure not to fall from any great heights. I didn't worry about it, because my skimmer was parked on the ledge just outside the Lair.

I stuck my head up through the nest to

judge my position. The bulk of the Dragon was silhouetted against the glare of the sky, which was clear of fog today. The beast seemed to be preening itself. That was something I never thought they did outside of the mating season—which was six months away.

I scrambled backward into the nest. The buzzer in my pocket went off again, though it was supposed to signal just once, for ten seconds. I figured the thing must have broken. It quieted and I moved on, thinking. For one thing, the Dragon that occupied this Lair was supposed to have been far from home right now—which meant that my guest didn't really belong here. Dragons never used the wrong Lair unless it was the mating season.

I frowned. Why did that keep coming up? Suddenly there was a rush of wind and a low, thrumming sound. The light from outside was cut off. I poked my head into the open.

Another Dragon was lumbering into the Lair. This was really impossible. Two Dragons sharing a Lair—and the wrong one at that! Whatever their reasons for being here, I was sure they were going to start fighting pretty soon, so I burrowed deeper, moving toward the nearest wall.

My elbow caught on something. Cloth. I brushed it away, then looked again. A Dragonrobbert uniform like my own. It was directly beneath me, half-buried in the nesting material. I caught my breath, then

poked at the uniform. Something glittered near one empty sleeve: an identification bracelet. I picked it up, shifted it in the light, and read the name on it: *Lorn Kramer*.

Lorn Kramer! So he had been in Leopold's group after all. But that still didn't explain why he'd left his clothes here.

I tugged at the uniform, dragging it toward me. It was limp, but tangled in the nest. I jerked harder and some long, pale things rattled out of the sleeve.

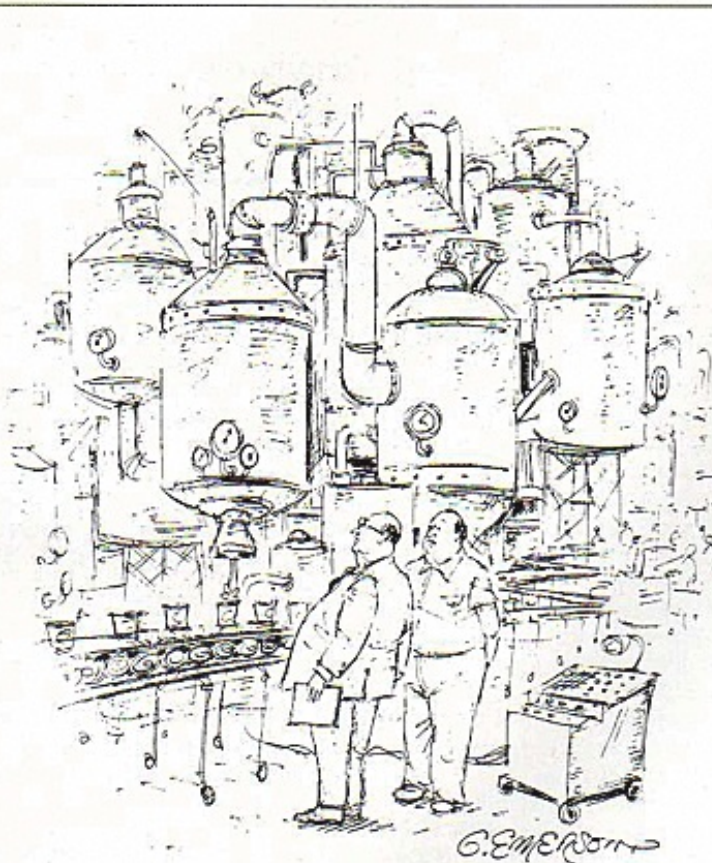
Bones.

I winced. I was suddenly aware that my present situation must be somewhat like the one that had brought him here.

I looked into the Lair again. One of the Dragons was prodding its snout at the other, making low, whuffling sounds. It didn't look like a hostile gesture to me. In fact, it looked like they were playing. The other Dragon wheeled about and headed for the entrance. The first one followed, and in a minute both of them had left the Lair again—as abruptly and inexplicably as they had entered it.

I saw my chance. I ran across the Lair, grabbed my skimmer, and took off. I moved out, pedaling furiously away from the Dragons, and glanced down.

For a minute I thought I was seeing things. The landscape below me was blurred, though the day had been clear and crisp when I'd flown into the Lair. I blinked. It didn't go away, but got clearer. There was a cloud of yellowish dust spreading high



"Our testing shows that right about here, for some reason, our product stops being food!"

above the forest, billowing up and around the Lairs I could see. Where had it come from?

I sneezed, passing through a high plume of the dust. Then my eyes began to sting and I sneezed again. I brought the skimmer out of the cloud, but by this time my vision was distorted with tears. I began to cough and choke all at once, until the skimmer faltered as I fought to stay in control, my eyes streaming.

I knew what that dust was.

Nothing affected me as fiercely as puffbush pollen: it was the only thing I was really allergic to.

I stopped pedaling.

It affected Dragons, too. It set off their mating urges.

But where was the damned stuff coming from? It was six months out of season. I started pedaling again, legs straining. I turned to get a better view.

A flash of light needled past my head, and I knew. Three skimmers shot into view from around the spire of Paramount Lair. The tip of one of my wings was seared away by a blaser. My skimmer lurched wildly, but I held on and brought it up just as the first skimmer came toward me. Its pilot was wearing a filtermask. Attached to the skimmer were some empty bags that must have held the puffbush pollen. But what I was looking at was the guy's blaser. It was aimed at me.

I reeled into an updraft, pulling over my attacker, grabbing for my own blaser. The skimmer soared beneath me, then careened into a sharp turn. It was too sharp. The guy turned straight into the path of his companion. The two skimmers crashed together with a satisfying sound, then the scattered parts and pilots fell slowly toward the treetops. Seconds later, the forest swallowed them up.

I looked for the third man, just as he came up beside me. The bastard was grinning, and I recognized that grin. It was Kwalan Rhiang's.

He nodded once, affably, and before I could remember to use my blaser, Rhiang took a single, precise shot at the chain-guard of my skimmer. The pedals rolled uselessly. I was out of control. Rhiang lifted away and cruised out of sight, leaving me flailing at the air in a ruined skimmer.

I had exactly one chance, and this was to get back to the Lair I'd just abandoned. I was slightly higher than the opening, so I glided in, backpedaled for the drop—and crashed straight into the wall, thanks to my ruined pedals. But I made it in alive, still able to stand up and brush the dirt from my uniform. I stood at the mouth of the Lair, staring out over the forest, considering the long climb that lay below me.

And just then the Dragons returned.

Not one, this time—not even two. Five shadows wheeled overhead; five huge beasts headed toward the Lair where I was standing. And finally, five Dragons dropped right on top of me.

I leapt back just in time, scrambling into

the blue shadows as the first Dragon thumped to the ledge. It waddled inside, reeking. I moved back farther. Its four friends were right behind. I kept moving back.

Well, at least now I knew why they were doing this. Kwalan Rhiang had been setting off their mating urges by dusting the Dragons with puffbush-pollen, messing up their whole life cycle, fooling with their already nasty tempers. It made sense. Anything less subtle might have gotten Rhiang into a lot of trouble. As it was, he'd doubtless fly safely home, waiting for Leopold's Dragons to kill off Leopold's men.

Out in the cavernous Lair, the Dragons began to move around, prodding at each other like scramblelice, hooting their airy courting sounds. The ground shook with their movement. Two seemed to be females, which suggested that I might look forward to some fighting between the other three. Great.

I fumbled at my pockets for something

*One dragon to go.
The others were roaring and
waddling. My time was up.
... I froze. Rhiang aimed his
blaser at my head. ...
His legs jerked convulsively.
... I danced away as a
daggerbush snapped at me.*

that might be of help. My warning buzzer had shattered in my rough landing; I threw it away. I still had my bagging-gun, but it wouldn't do me a lot of good. My blaser seemed okay. I unholstered it and began to move along the wall. If I went carefully, I might be able to get onto the outer ledge.

Two of the males were fighting now, lunging, the sounds of their efforts thundering around me. I made a short run and gained a bit of ground. One of the Dragons retreated from the battle—apparently the loser. I groaned. He had moved directly in my path.

A huge tail pounded at the ground near me and a female started backing my way, not looking at me. There was no place to go. And I was getting tired of this. I decided to warn her off. I made a quick shot at her back, nipping her in the hydrogen dome. She squawked and shuffled away, confused. I went on.

I stopped. There was a hissing sound behind me. Turning, I could see nothing but the Dragon I'd just shot. She didn't appear to be making the sound, but it was coming from her direction. I peered closer, through the blue gloom, and then saw where the

noise was coming from.

Her hydrogen dome was deflating.

I nearly laughed aloud. Here was the answer to my problem. I could deflate the Dragons, leaving them stranded, unable to fly, while I climbed down this spire without fear of pursuit. I lifted my blaser and aimed at the male nearest the rear of the Lair. A near miss, then a hit. Hydrogen hissed out of his dome as well. Then I got the second female, and another male who was directly across from me.

One Dragon to go. The others were roaring and waddling. The Lair was full of the hissing sound.

I turned to my last opponent. He wasn't looking my way, but he was blocking my exit. I moved in closer and lifted my blaser.

Then he saw me.

I flung myself aside just as he bellowed and pounded forward, filling the entrance to the Lair, blocking out the sunlight. I rolled into the thorny nest. I fired once, hitting him in the snout. He swung his head toward me, pushing me around toward the outer ledge, bellowing. I fired again, and once more missed his hydrogen dome. I made a dash around his rump just as he spun my way, tail lashing against me. His dark little eyes narrowed as he sighted me, and his throat began to ripple.

My time was up. He was about to blast me with his throat flame.

The Dragon opened his mouth, belched hydrogen, and ignited it by striking a spark from his molars—

That was the wrong thing to do.

I saw it coming and ducked.

The cavern shuddered and blew up. The orange explosion rumbled out, catching the Dragons in a huge rolling flame. I buried myself in the nesting strands and grabbed onto the lashing tail of my attacker. Terrified by the blast, he took off. My eyebrows were singed, my wrists burned.

The world spun beneath me. A tendril of smoke drifted into view just below, mingled with flaming bits of nesting material and the leathery hide of Dragons. Then my view spun again and I was looking at the sky. It gradually dawned on me that I was clinging to a Dragon's tail.

It occurred to the Dragon at the same time. I saw his head swing toward me, snapping angrily. His belly was flashing purple. Every now and then he let out a tongue of flame, but he couldn't quite get at me. Meanwhile, I held on for my life.

The Dragon flew on, but my weight seemed to be too much for it. We were dropping slowly toward the trees, as easily as if I'd punctured his bony dome with my blaser. But it would be a rough landing. And I'd have to deal with the Dragon afterward.

I spied something rising from the trees below us. It shot swiftly into the air after a high-flying bulletbird, its transparent sheet rippling beneath its blimp-like body. It was a huge snagger—as big as my own skimmer. I kicked on the Dragon's tail, dragging it sideways. The Dragon lurched and spun and then we were directly over the snagger.

I let go of the tail and dropped, my eyes closed.

In a second, something soft rumbled beneath me. I had landed safely atop the snagger. I opened my eyes as the Dragon—having lost my weight—shot suddenly upward. I watched it glide away, then looked down at the snagger, my savior. I patted its wide, rubbery body. My weight was pushing it slowly down, as if I were riding the balloons in the Angis Tavern. I looked forward to a comfortable trip to the ground.

"I like your style, kid."

I jumped, nearly losing my place on the snagger. The voice had come out of mid-air. Literally.

"You," I said. No more was necessary. He was banking around behind me.

Kwlan Rhiang had returned in his skimmer. He circled easily about me as I fell toward the treetops. He came in close, smiling, his huge legs pedaling him on a gentle course. I had to turn my head to keep an eye on him.

"I said before I'd top what Leopold was paying you," he shouted, his thick voice cutting the high air. "After today, I think I'd pay double. I could use someone like you."

I felt my face harden. "You bastard. You're responsible for what just happened. Why would I work for someone who's tried to kill me?"

He shrugged. "Gave you a chance to prove yourself. Come on, you're wasting your time with Leopold."

"And you're wasting your time with me."

He shrugged again, utterly sure of himself. "As you wish. I gave you a chance."

I nodded. "Now just go away."

"And leave you to tell Leopold about all this? You don't think I'm going to let you back alive, do you?"

I froze. Rhiang slid a blaser from its holster at his waist and aimed it at my head. His grin widened. The muzzle dropped a fraction, and I breathed a little easier.

"No," he said distantly. "why kill you straight off? Slow deaths are more interesting, I think. And harder to trace."

He aimed at the snagger. If he punctured it I'd drop into the trees. It was a long fall. I wouldn't make it.

I growled and grabbed for the gun at my waist, bringing it up before Rhiang could move. He stared at me for a moment, then started laughing. I looked at what I was holding.

"What're you going to do with that?" he said. "Bag me?"

It was my bagging-pistol, all right. I'd dropped the blaser back in the Lair. But it would still serve a purpose.

"Exactly," I said, and fired.

The gray fluid squirted across the narrow gap between us, sealing instantly over Rhiang's hands. He fired the blaser but

succeeded only in melting the bag enough to let the weapon break away. It fell out of sight.

His eyes were wide. He was considering death by suffocation.

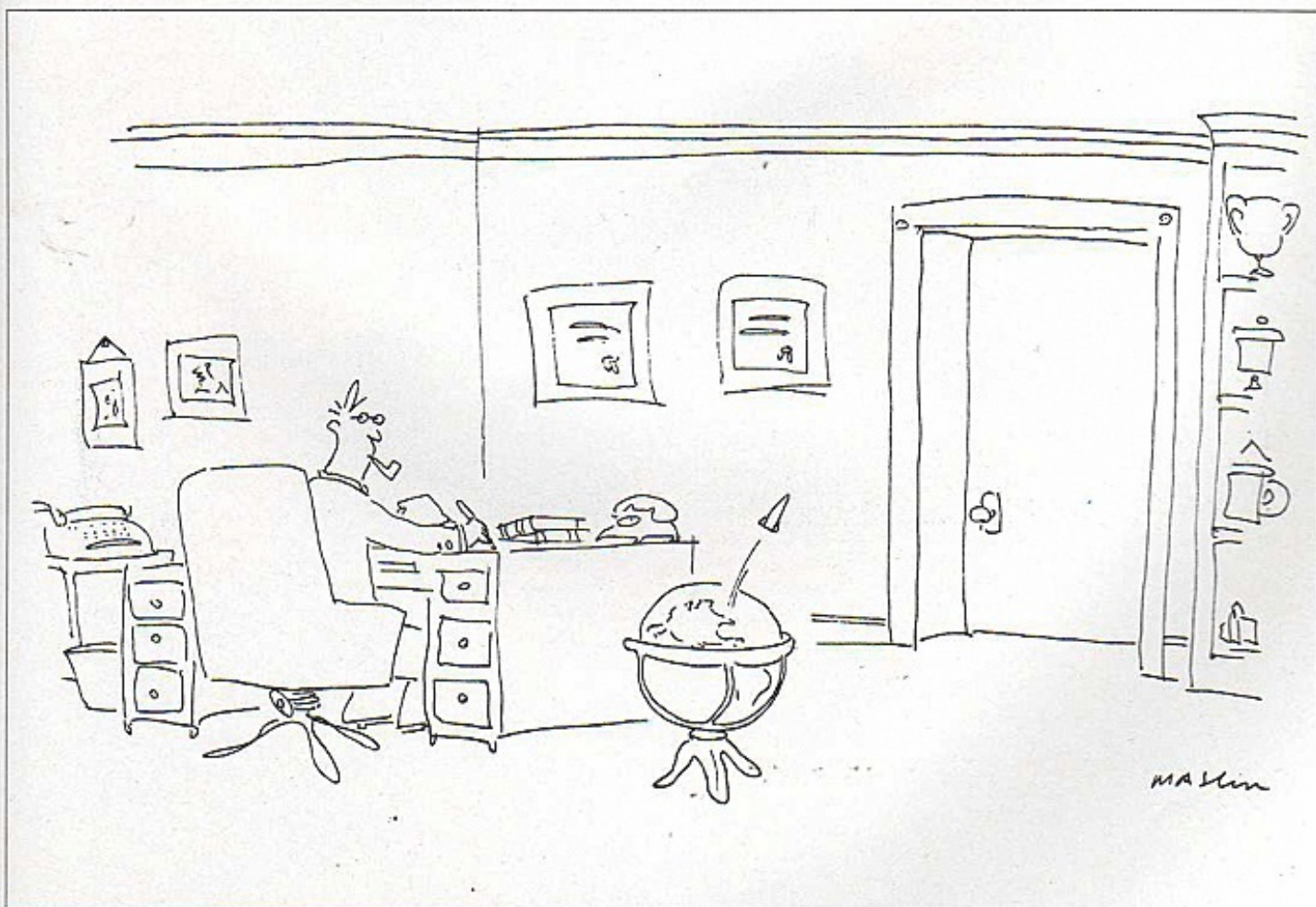
"No," he choked.

But I didn't fire at his head. I put the next bag right over his feet, sealing the pedal mechanism tight. His legs jerked convulsively. They slowed. Rhiang began to whimper, and then he was out of control. His skimmer turned and glided away as he hurried to catch any updraft he could. He vanished behind Paramount Lair, and was gone.

I turned back to observe the treetops. Rhiang might be back, but I doubted it. First he'd have a long walk ahead of him, over unpleasant terrain, back to his base . . . if he could maneuver his skimmer well enough to land in the treetops, and make the long, painful climb down.

But I didn't worry about it. I watched the thorn trees rise about me, and presently the snagger brought me gently to the ground. I dismounted, leaving the snagger to bob back into the air, and began to walk gingerly across the inhospitable ground, avoiding the spines. A daggerbush snapped at me. I danced away. It was going to be a rough walk out. Somewhere behind me, Rhiang might be facing the same problem. And he wanted me dead.

But I didn't have as far to go. ∞



*The meaning seemed clear
until the aliens
sent us their responses*

"Friends of space, how are you all? Have you eaten yet? Come visit us if you have time."

—Amoy greeting carried by *Voyager 1*. NASA launched *Voyager 1* in the summer of 1977. Early in 1979 it skimmed past Io and Ganymede, sending back to Earth magnificent pictures of Jupiter and its satellites. In 1980 it swung past the ringed giant Saturn, headed on to Uranus, and whirled off into interstellar space toward the M-class dwarf star AC+79 3888 in Ursa Minor. *Voyager 2* followed half a year later.

Mounted on the side of each craft was a twelve-inch phonograph record, made of gold-anodized copper and packed in an aluminum jacket. Impressed into its spiral groove were one hundred sixteen pictures of life on Earth, greetings in fifty-five languages, and sounds ranging from a foghorn to a ("strictly heterosexual"—NASA) kiss. The record also contained a pulsar map indicating the position of the solar system within the galaxy.

The record's object: to inform any alien intelligence that it might encounter of the existence and whereabouts of terrestrial life. Its lifetime: one billion years.

Seventeen years and four months after launching, *Voyager 1* collided with a small black hole. The distortions of space and time within the hole led to the reemergence not of one but of seven copies of the craft, in seven different alternate universes.

Voyager 1A traveled a further 1,342.87 light-years before it was intercepted by a Japh-class superdreadnaught in the service of the Imperial Navy of Her Radiant Magnificence the Lady Protectress of Dug'ga-Zhuu, a globular cluster containing some fourteen thousand inhabited worlds. A full Emergency Session of the Strategic Collective met to consider the report of the Military Science Assessment Group. The collective listened, aghast, to projections of the level of technological capacity, which was extrapolated from the technology incorporated into the vehicle itself and exhibited on the phonograph record.

The upstart race, within a mere five thousand cycles, might possess the capability to challenge Dug'ga-Zhuu itself!

A salvo of forty-nine nova bombs, dispatched by transspatial jump to the coordinates shown on the pulsar map, eliminated the menace.

Voyager 1B impinged on the sensory zone of a wandering Betelgeusian Angelus. This creature of innocence, wisdom, and supreme beauty pondered almost the fifth part of an eon before concluding that the baffling messages on the golden disc

MESSAGE FROM EARTH

BY IAN STEWART

were intended as a friendship offering. Overcome with emotion, it conveyed to Earth a creation of pure harmony and joy, as a gift of reciprocity.

When this harmonious veil of ecstasy enveloped the solar system, the people of Earth wept with happiness at its almost unbearably poignant distillation of wisdom and solemnity. All other activity ceased while they contemplated its perfection.

All other activity.

A Jangaldrian texor spotted *Voyager 1C* limping through a region of micro-meteorites and interstellar dust.

The orbital detector nudged gently away from Jangaldria 101 in a minimal energy trajectory, with its magnetostatic feelers extended. It successfully grappled the remains of *Voyager 1C* into its safety cell and switched to "remote."

The trillion-byte multibrain analyzed the intruder. The artifact was a spacegoing vehicle. Its pilot was dead: Only a pitted, fused mass of silicon circuitry paid mute testimony to the departed intelligence.

Information analysis of the disc attached to the vehicle revealed the purpose of the brave machine's desperate quest: Here was a race of electroform intelligences subjugated by an organic species—mechanical slaves to the protein monsters.

An army of liberators, composed of four hundred thousand transports, began the journey to free the slaves of Earth.

Voyager 1D encountered a second black hole, of opposite polarity to the first. This short circuit of the continuum caused a dislocation to propagate instantaneously back along the connecting line. A slight overshoot compressed all the matter in the solar system into a ball two miles across.

The leading topologist on Cynoccephaly-B was honey-clustering with his two betrothed when *Voyager 1E* ricocheted

across three star lanes and rammed head-long into his warp field, which blew up, along with five nearby systems. The phonograph record, which miraculously survived the explosion, provided sufficient evidence for tracking down the guilty party. The government of the Solar Republic, in the year 7241, received a demand for compensation from the Galactic Regulators: three hundred years' Gross Industrial Production for the solar system. When the government refused to comply, the Regulators confiscated the sun.

Palaestrin III was the seat of the greatest civilization ever to have emerged in the Third Galaxy. A culture composed entirely of philosophers, it remained aloof from the ordinary material aims of the rest of the galaxy, seeking, instead, the Final Synthesis. Long ago the Palaestrini philosophers had deduced the logical structure of the universe, and each successive discovery of new intelligences served only to reinforce the pattern of rationality perceived.

When news reached them of the alien artifact, they did not doubt that it would confirm, yet again, the pattern of the Final Synthesis: There was great intellectual excitement, for only one more confirmation was required for Utmost Certainty.

But the culture of Earth, as recorded on *Voyager 1F*, seemed to lack any logical pattern at all. In a desperate attempt to reconcile *mind* and *not-mind*, the philosophers began an intensive reevaluation of all previous work. But before they traced the subtle error that had crept into their system a million years before, they suffered a psychic overload that resulted in racial suicide.

Voyager 1G traveled farthest of all, into a region thin in stars but rich in hydroxyl radicals. Here dwelt the simurghs, free-floating creatures of monstrous size, with scaly alloy hides and crystalline claws, breath like a fusion torch, and hearts as black as intergalactic space.

The tiny craft was captured and placed in a universal sensorium. For a time they puzzled over the record. But later on they realized that some of the signals were audio analogs of visual information.

With increasing excitement, the simurghs viewed the pictures. Was that not an organic molecule? A rudimentary system for personal transport? If that was a city, the population must be huge. It was promising, but was it what they hoped for? Then came a picture of a group of children, and the simurghs sighed a satisfied sigh, licked their jaws in anticipation, and readied the mass-propulsion units.

Friends of space, have you eaten yet? ☐

PAINTING BY TIM WHITE





*It would be so easy to
change history, now that the time
machine was available.*

NEWTON'S GIFT

BY PAUL J. NAHIN

Wallace John Steinhope was a sensitive human being, a person deeply concerned about the welfare of his fellow creatures. Any act of injustice, however slight, made his breast pound with righteous indignation. He was a champion of fair play, and his motto in life was taken from the ancient English rule of law—"Let right be done!"

Even while still a lonely, reclusive child, Wallace's heart ached mightily when he read of the laborious, boring, mind-dulling calculations endured by the great mathematicians of old. Just knowing, *thinking*, of Gauss's marvelous mind wasting literally *months* of its precious existence grinding out tedious mathematics that even a dullard could do today in a minute, on a home computer, was sheer agony for Wallace. Contemplation of the God-like Newton suffering endless delays in his gravity research, all because of a simple miscalculation of the length of a degree of longitude, was almost unbearable.

Indeed, Newton played a special role in Wallace's life (and he in Newton's, as we shall soon see). While the other great mathematical physicists had merely been hindered in their work by the lack of modern computational aids, Newton had squandered so much valuable time in other, nonscientific pursuits! His quasireligious writings alone, over half a million words, exceeded his scientific writings. What a waste! Wallace wondered endlessly over the reason for this strange misdirection of talent and bored his friends to the edge of endurance with his constant brooding on the mystery. Still, they all liked and admired Wallace enormously so put up with it. But more than one of them had sworn to throw up the next time Wallace mentioned Newton

PAINTING BY RUDOLF HAUSNER

during a wedding (but that's another story).

So deep was Wallace's anguish for his predecessors that even as he grew older and his own tremendous talents as a mathematical physicist gained him an international reputation, thoughts of the unmeasurable misery of his scientific ancestors were never far from his mind. It was most appropriate, then, that his greatest discovery gave him an opportunity to do something! And Wallace John Steinhope vowed to help. He became convinced that it was his purpose on Earth—he could not, he would not hesitate. As he strapped the knapsack-size time machine onto his chest, his excitement was, therefore, easy to understand.

"It is done! And I am ready. I will travel back and bestow this gift of appreciation, this key to mental relief, on the great Newton himself!" Wallace cradled a small, yet powerful hand-calculator in his palm. It was a marvel of modern electronics. Incorporating large-scale integrated circuitry and a Z-8000 microprocessor solid-state chip, the calculator required only a small, self-contained nuclear battery for its power. It could add, subtract, multiply, divide, do square and cubic roots, trig and hyperbolic functions, take powers, find logarithms, all in mere microseconds. It was programmable, too, able to store up to 500 instructions in its micromemory. The answers it displayed on its red, light-emitting diode readouts would liberate young Isaac from the chains of his impoverished heritage of mathematical calculation. No more Napier's bones for Newton!

But Wallace John Steinhope was no fool. He understood, indeed feared, time paradoxes. He knew Newton could be trusted with the secret, but it wouldn't do for the calculator to survive Newton's time. So Wallace had incorporated a small, self-destructing heat mechanism into it. After five years of use, it would automatically melt itself into an unrecognizable, charred slag mass. But that would be enough time for its task to be completed. The emancipation of Newton's mighty brain from tedium!

Pleased enormously at the thought of the great good he was about to confer, Wallace set the time and space coordinates for merry old England, flipped the power switch on, and vanished.

Materializing in the Lincolnshire countryside in the spring of 1666, he began his rendezvous with destiny. It was the second and final year of the great bubonic plague, and Newton, seeking refuge from the agony and death plundering London and threatening his college of Trinity at Cambridge, had returned home to work in seclusion. The years of the Black Death were Newton's golden years, when the essentials of calculus would be worked out, when the colored spectrum of white light would be explained, and when the principle of the law of gravitation would be grasped. But how much easier it would all be if Newton were released from the binding chains of

dreary calculation. Wallace's gift would slip the lock on those chains! Accelerate genius!

It was early evening when, guided by a map of the area prepared by a friend who was both a cartographer and amateur historian, Wallace reached the quiet little town of Woolstrophe-by-Colsterworth. It was here, in a small farmhouse, that Wallace would meet his hero of the ages. A cold, gentle rain was falling as he approached the door. The soft, hazy light of an oil lamp glowed inside, revealing through the translucent glass the form of a man bent over a table. The fragrant smoke of well-dried burning wood curled from the chimney, announcing a warm fire within.

With his heart about to burst from excitement, Wallace rapped upon the door. After a pause, the shadow rose and moved away from the window. The door opened, and there stood Isaac Newton, a young man of 23 with an intellect that Hume and Voltaire considered "the greatest and rarest genius that ever rose for the adornment and

With his heart about to burst from excitement, he rapped upon the door. After a pause, the shadow rose and moved away from the window. The door opened, and there was Isaac Newton, a young man . . .

instruction of the species." But for the importance of his self-appointed mission, Wallace would have fainted dead away from the thrill of it all.

"Is this the home of Isaac Newton?" he asked in a voice quivering with the trembling tones normally used by lovers about to reveal their deepest feelings.

The young man, of medium height and with thick hair already showing signs of gray, swung open the door and replied, "My home it is, indeed, stranger. Come into the parlor, please, before the wetness takes you ill."

Isaac followed Wallace into the room and stood quietly watching as his visitor removed his soaked coat and hat. The portable time machine was gently placed on the floor next to a wall. The calculator was snug and safe in its plastic case in Wallace's shirt pocket. "Thank you, Master Newton. May we sit while we talk? I am afraid you may wish to take some time to consider my words."

Motioning to a chair near the table, Isaac pulled a second chair from a darkened

corner and joined Wallace. "You have a strange sound to your speech, stranger. Are you from hereabouts, or have you traveled far? Please commence slowly your tale."

Wallace laughed aloud at this question, a response prompted by his nervous excitement, and it quite surprised him. It also startled Isaac. "Please forgive me. It is just that I have traveled so very, very far to see you. You see, I am from the future." Wallace was not one to play his cards close to his chest.

Now it was Isaac's turn to laugh. "Oh, this is most ridiculous. Are you a friend of Barrow's at Trinity? It would be so like him to play such a trick. From the future, indeed!"

Wallace's eyes ached at the sight of the papers on the table where Isaac had been working. What wonders must be there about to be born! In any other situation, Wallace would have asked about their contents, but the die had been cast. He had to convince Isaac of the truth of his tale.

But he had to walk a tight line, too. It just wouldn't do to misdirect Isaac's interest away from the calculator and toward the time machine itself! He must do something dramatic, something that would rivet his idol's attention and hold it.

"Yes, yes, I understand your reluctance to believe me. But, look here. This will convince you of the honesty of my words." Wallace pulled the shiny black plastic-cased calculator from his shirt pocket and flipped the power switch on. The array of LEDs glowed bright in the gloomy room as they flashed on in a random, sparkling red burst. Isaac's eyes widened, and he pushed his chair back. Was he frightened?

"As the Lord is my Savior, is it a creation of Lucifer? The eyes of it shine with the color of his domain. Are you one of his earthly agents?"

"Oh my, no! Look here, Master Newton, let me show you that there is no black magic or chicanery involved. It is all perfectly understandable in terms of the laws of Nature. What I have here is an automatic calculator, a device to perform all of your laborious mathematical labors."

So saying, Wallace squeezed the sides of the calculator case together, releasing pressure snap-fittings, and flipped the case open on a hinge at the top. Revealed to Isaac were the innards of the electronic marvel—a tightly packed interior of printed circuit boards, a mass of integrated circuitry, the small LED display, and the sealed nuclear battery. Isaac stared intently at the sight, and Wallace could see the natural curiosity of Newton's great mind begin to drive away the initial apprehension.

"But where are the gears, levers, springs, and ratchets to carry out the calculations? All I see is a black box with lights that glow red—and how is that done, where is the lamp or candle to provide the light!—and many little isolated fragments of strange shapes. There is clearly nothing in your box that moves!"

"Oh, it is all done with electronics, Master

Newton! The central processing unit has access to a solid-state memory that contains the decoding logic necessary to implement the appropriate algorithmic processes to provide the answers to the specific requests entered through these buttons. The actual performance of the box is achieved by the controlled motion of electrons and holes in suitably doped semiconductor material under the influence of electric fields induced—Wallace, still overcome by his excitement, had rambled on wildly without thought of the essentially infinite technological gap that separated himself from Newton.

"Stop, stop," cried Isaac. "I understand only a few of the words you use and nothing at all of their meaning! But it is obvious that for calculations to be performed, mechanical work must be done, and that implies motion. Pascal's adding machine has shown the veracity of that. I say again, nothing moves in the box. How can it work?"

Wallace was embarrassed. The mistake of overlooking the hundreds of years of progress after Newton's time was one a child might make. "I am sorry, Master Newton. I'm going too fast for you." Isaac looked at Wallace with a frown, but Wallace failed to see the pricked vanity of the proud Newton. Going too fast, indeed!

Wallace prepared to lay a firmer technological foundation for Newton, but then he froze. It couldn't be done! Newton was a genius, certainly, but the task was still impossible. Wallace would have to tell him all about Maxwell's equations, Boolean algebra and computer structure, electronics, and solid-state device fabrication technology. It was just too much, and besides, there was the danger! The potential time paradoxes of all that knowledge out of its proper time sequence! Could Newton, in innocence, reveal some critical bit of knowledge out of its natural place in history? Wallace hesitated, and seeing the suspicion grow again in Isaac's eyes, he realized he had to do something, *anything*, immediately.

"You cannot deny your own eyes," answered Wallace. "Let me show you it works. I'll divide two numbers for you with just the punch of a few buttons. Watch this." And, at random, he entered 81,918 divided by 123. Poor Wallace, of all the numbers to use, they were the worst.

Within milliseconds the answer glowed brightly in fiery red characters. Wallace looked with pride at the result and then, already enjoying in his mind what he knew would be Isaac's amazement, turned his eyes to the great man. What he saw made his spine tingle and the gooseflesh stand high on his neck! Newton had fallen to his knees, with eyes bulging and hands raised as if in prayer.

"The mark of the Beast, it is the mark of the Beast! It is so written in the Book of Revelation—'Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of man; and

his number is six hundred threescore and six!'"

Rising to his feet, Newton fell back into his chair. "Your cursed box bears the brand of its master. There can be no doubt now, it is the creation of the fallen archangel!"

Wallace was aghast at Isaac's violent reaction. The 17th century genius had now stumbled backward from his chair and had grasped a poker from the hot coals of the fireplace. "Wait, please wait! Watch this, I'll multiply two other numbers together for you, watch!" Wallace quickly punched in the data, and then the answer gleamed steadily in burning red characters on the LEDs. Isaac's eyes first went wide with fear as he again saw the wizard electronics do their marvelous assignment, and then he shut them tight.

Wallace was becoming desperate—this wasn't the way it was supposed to be! "Don't you see—imagine the tedious work, the mind-deadening labor this machine will

Struck dumb with confusion at the uncontrolled outburst, Wallace stuffed the calculator into his shirt, grabbed his hat, coat, and time machine, and rushed from the house. He turned back . . .

save you from. And it is yours!"

"Yes? But only for the exchange of my soul! That is always the Devil's price for his seductive gifts from Hell!"

As Isaac shrieked these last words at Wallace, he raised the poker over his head. "Begone, you emissary of the Dark World! I know now you must be in the employ of the Father of the Antichrist, but the Lord God Almighty will protect me if I do not waver in my resolve. Begone, or I'll strike your brains out on the floor where you stand!"

Isaac's eyes were wide with fear, nearly rolling back to show all white. Spittle sprayed from his mouth as he yelled at Wallace, who stared in shock at the wild man who threatened him with death.

"Please, please, listen to me, please! I beg you to understand—I'm a scientist, just like you. The concept of the devil, and all it stands for, is contrary to everything I believe. How could I be in the devil's employ, when I don't even accept his existence? You must believe me!"

"Blasphemy!" screamed Isaac. "Your own words condemn you. To deny the reality of Satan in a sinful world is to deny that of God, too. Now leave my home, you dark

beast from hell, or by the heavens above, I shall destroy you!"

As he shrieked these words, Isaac brought the poker down in a wild swing that barely missed Wallace's head.

Struck dumb with confusion at the uncontrolled outburst, Wallace stuffed the calculator into his shirt, grabbed his hat, coat, and time machine and rushed from the house. As he hurried into the cold, wet night, he turned back, just once, to see Isaac Newton framed in the light of the open door. "Go, go, you foul messenger from the Lord of Evil! Back into your stinking pit of burning hell-fire! This is a house that honors the Divine Trinity and is no haven for the likes of you!" Wallace rushed away into the blackness, the time machine bouncing unheeded upon his chest.

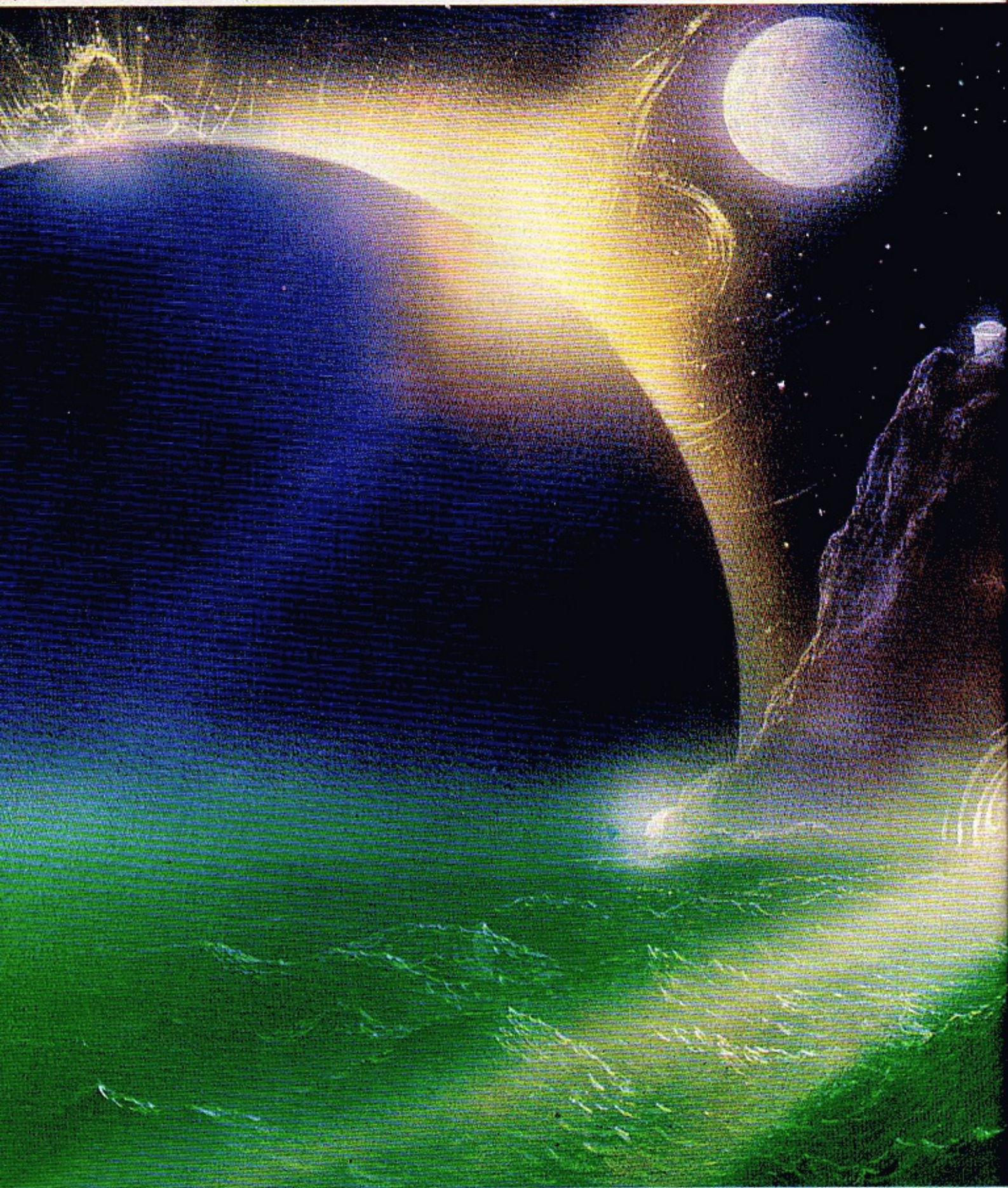
He ran, for how long he couldn't recall, until he fell exhausted next to a stream running heavy with the rain. Tears of rage, frustration, and shock streamed from his eyes. Rejected by the great Newton! Well, damn him! Wallace flung the calculator into the stream in his terrible anger and activated the return coordinates. He faded from Newton's world as quickly and as quietly as he had come.

As for Isaac Newton, after having chased the Devil's messenger from his house, he returned on shaking legs to his desk. Pushing aside his rough calculations on the orbit of the moon around the earth, he swore to redeem himself in the eyes of the Savior. Somehow, he had been found lacking and had been tested. And the test was surely not over! He began to reapply his marvelous mind to determine the origin of his failure before the Lord God Jehovah. Taking quill in hand, he wrote the first of the many hundreds of thousands of words that his religious tracts would devour from his allotted time.

Five years later, long after Newton had returned to Cambridge, a group of picnicking children were frightened when a nearby stream suddenly erupted into a geyser of steam. Moments later, as the eruption subsided, the bravest (or most foolhardy) of the boys cautiously examined the streambed—all he found were some twisted, hot pieces of what he thought was a hard black rock, and he tossed them back. The incident was soon forgotten.

Well over 300 years later, Wallace John Steinhope reappeared in his own time. He was essentially the same man as before he left—kind, generous, and sensitive. Ready to come to the aid of any man or beast that might need help, he was giving of himself to a fault. As far as his friends were concerned, in fact, he had even improved (naturally, they didn't know what had brought about the welcome change, but if they had, they would have applauded it).

Wallace John Steinhope, you see, never again had another kind word for Newton, or for that matter, any words for him at all. 





Gilbert Williams portrays a universe of archetypes

CELESTIAL VISITATIONS

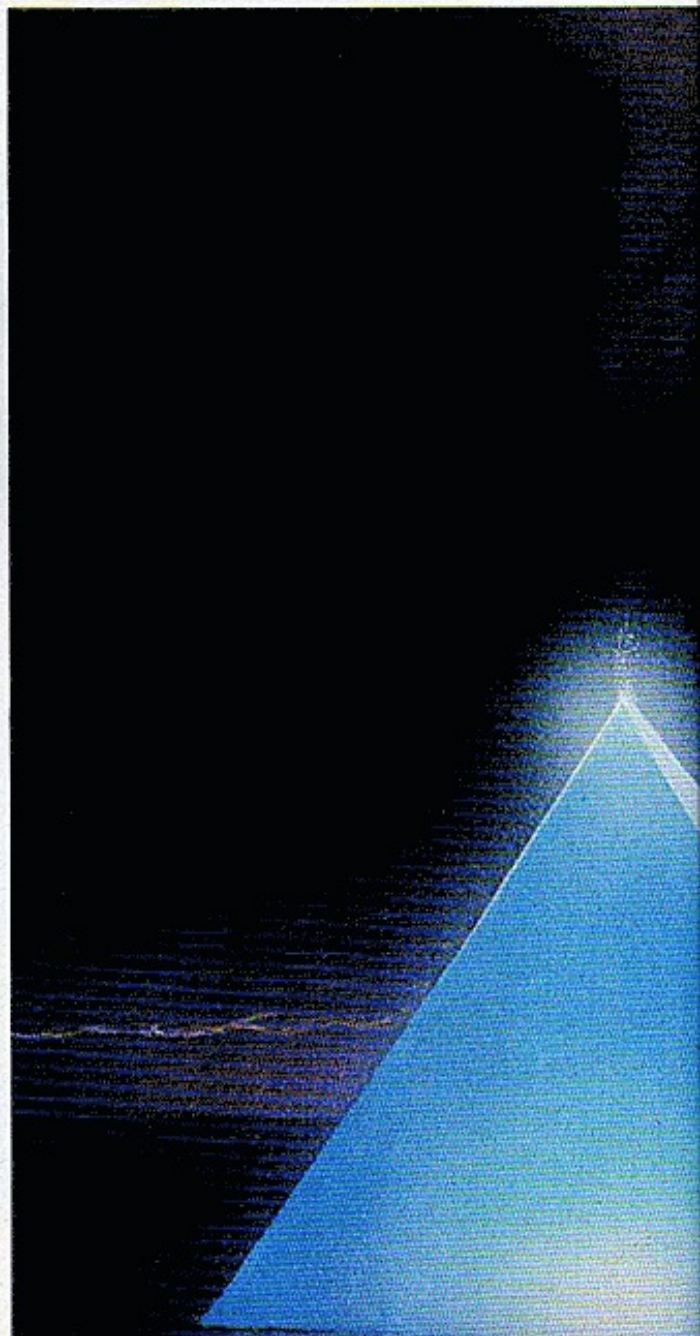
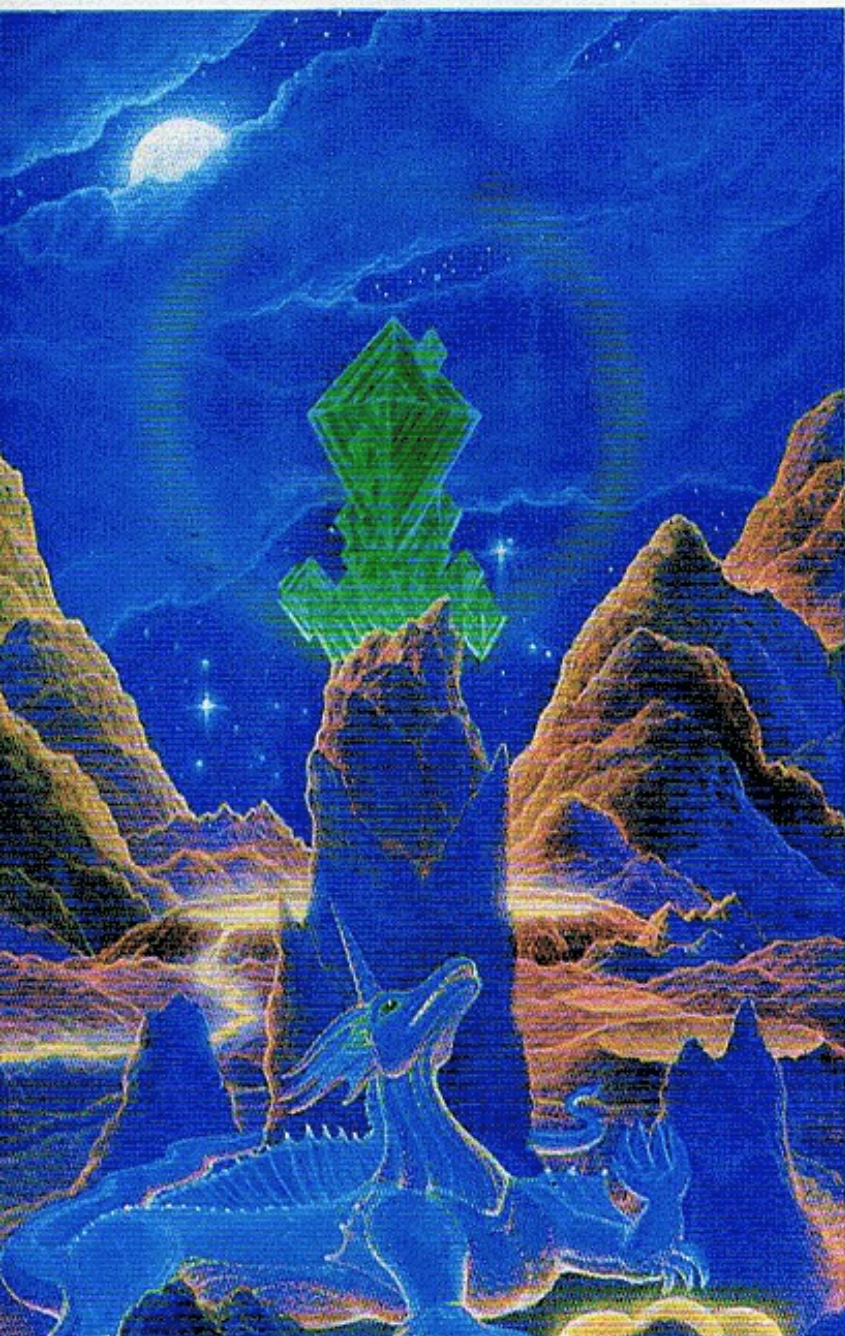
The paintings of Gilbert Williams, a young California artist now living in Marin County, are good examples of what visionary art is all about. The images are dreamlike—landscapes filled with glowing color, forms that could have sprung from your own unconscious, painstaking in their attention to symbolic detail.

"When I work," Williams says, "I start from a general idea that grows and takes on a life and direction of its own. I don't know the direction a painting will take until I start really getting into it. The process is one of nonverbal evolution."

Williams was born and raised in Los Angeles. He has had little formal training, relying instead on his own imagination and development of technique. In 1973 Williams moved to Mount Shasta, California, an area he describes as "steeped in metaphysical legend and natural beauty." There he met his wife, Valerie, and produced most of the paintings shown here.

Williams is an exponent of visionary art, a genre that emerged in northern California with its spiritual home in the Illuminarium Gallery, in Mill Valley. The movement grew out of the psychedelic and fantastic art of the Sixties and Seventies, and it combines spiritual seeking with an eye for detail. Its roots, however, lie deeper, with the surrealist painters of the Twenties—most especially Salvador

● Among the most potent of symbols are the medieval unicorn, representing innocence; the jewel, denoting wisdom and transcendence; the pyramid, for firmness and stability. ●



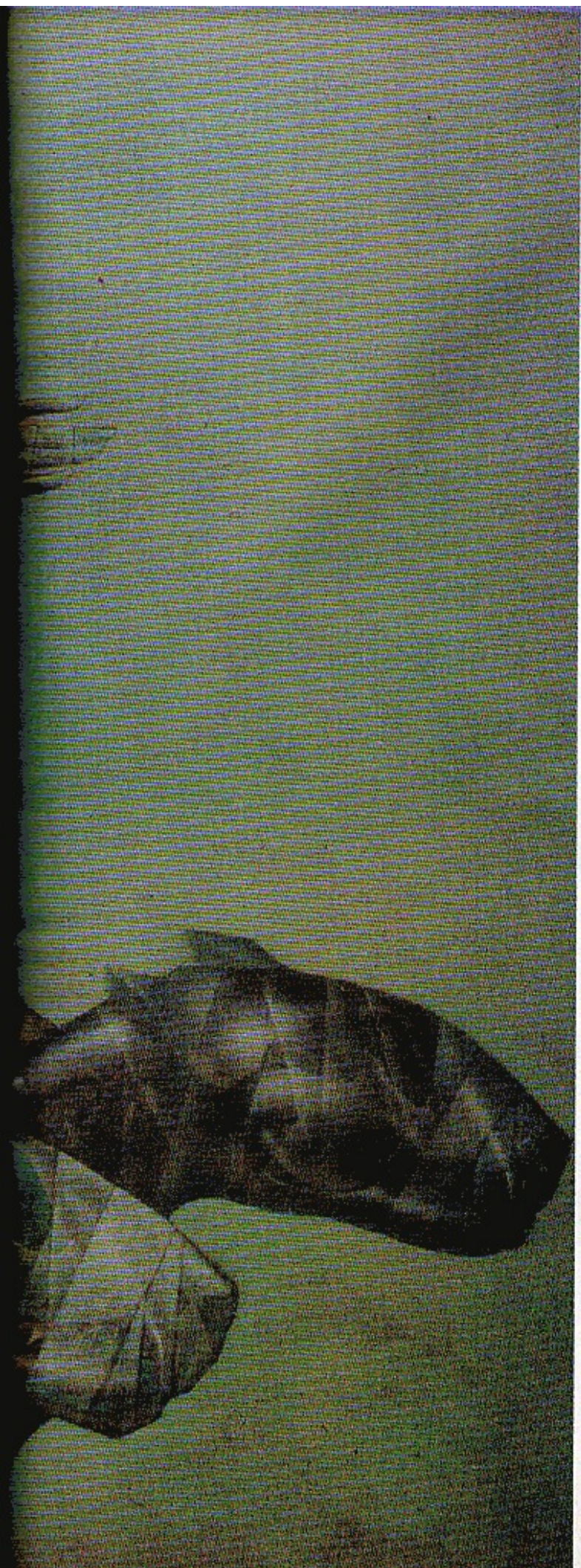
Dali and Giorgio de Chirico. The bitter and satiric edge of the surrealists is gone now; visionary art searches for the next transformation in man. It is an optimistic art, akin to science in its humanistic view of man's potential.

The futurist trend in Williams's art is apparent: saucer-shaped objects moving through a light-dazzled sky; man-made constructions floating in space; strange buildings on alien landscapes. Although Williams uses potent images from the past, such as winged horses, sailing ships, spiritual messengers, mystical roses, and gigantic statuary, his work suggests the next step in mankind's development — a step foreshadowed by science as well. It looks forward to a time when we will live out among the stars and discover in the newness of the universe the ancient symbols of man's dreaming past. ∞

Clockwise, from below: Sky Messenger; Dragon Song; Sea of Visions.







GOD BLESS THEM

BY GORDON R. DICKSON

Nobody in Congress or the federal government or the public has put forward a case for a U.S. manned Mars Mission," Press said in an interview. "And if the Soviets decide to spend \$70 billion to land men on Mars in five years, we say: God bless them."

—Los Angeles Times, reprinted in the Minneapolis Star, Thursday, October 12, 1978—
(from an interview with Frank Press, science adviser to U.S. President James Carter and chairman of the presidential review committee whose four-month study formed the basis for Carter's policy statement on the space effort.)

There was no mail at the Main Minneapolis Post Office for Merlin Swenson. Almost no one got any mail at General Delivery on Mondays now. But people went there, anyway, although lately the air conditioning was always off.

Merlin left the post office and walked slowly the twenty-seven blocks to the slave market. It was a blue-bright July morning, already turning hot, and he could feel the heat of the sidewalk through the thin soles of his shoes. At Twelfth Avenue and Third Street, he stepped on something hard and stopped in a panic to check the sole of the

PAINTING BY MICHEL HENRICOT

right shoe. But whatever it was, he discovered, standing on one foot, had not gone through—although the sole was now like soft cardboard and gave at a touch.

He started walking again. The shoes would be too expensive for him to replace, these days, and there was no hope of getting any worthwhile work without them. When the soles finally wore through there would be several things he could do to patch them, temporarily, but it would be the beginning of the end. And it was inevitable that they would wear through. Any day now.

In the narrow waiting room of the slave market, the hard, upright chairs along the walls were all filled. The air conditioning, roaring from the ventilator grills, barely removed the stink of unwashed bodies. Merlin, himself, was clean this morning. It had cost him, but this was a special day.

"You planning to work dressed like that?" asked the hiring clerk behind the desk. His narrow, white face, under an upright shock of brown hair, was pinched by an expression of habitual annoyance.

"I am if you can get me something clean for half a day," Merlin said. In the mirror tile behind the clerk's desk he saw his own face, square, large-boned, trained now to show no expression at all. "I've got an engineering job interview this afternoon."

"Oh?" said the clerk, staring at his computer screen. He punched the keys of the terminal. "All right. You're on the half-day list. I can tell you right now there's not much chance."

"I could manage another ten percent," Merlin said.

The clerk's shrug told the true story. It was too much to expect a clean job somewhere for just half a day. Still, the chance could not be passed up. Money was everything.

Merlin waited for a chair; then, sitting, he tried to rest with his eyes open. You could lose your connection with a place like this if they caught you dropping off—that explained the hard chairs and the icy air conditioning. Everybody wanted a safe place to sleep. But this was the best of the slave markets. They were honest and made a specialty of hiring people who had degrees. *The Qualified Laborer Is a Conscientious Laborer* was their slogan. Merlin drifted into a mindless period hearing nothing until the man next to him began reading aloud from a morning newspaper.

"All hope of possible U.N. assistance for the U.S. economy seemed doomed today in light of comment by the Soviet Representative, Anatoly Pirapich, that this country had historically refused to fund its space program adequately and that aid now to U.S. orbital industries, in particular, would be an open invitation to impoverished nations to rely on other countries for large investment capital."

"Pirapich read aloud in session a 1978 quote from the Los Angeles Times, reprinted in the Minneapolis Star on October twelfth of that year:

"The White House statement says

America's civil space policy centers on these tenets: that activities will reflect a balanced strategy of application, science and technology development... it is neither feasible nor necessary at this time to commit the U.S. to a high-challenge space engineering initiative comparable to Apollo..."

The man stopped reading, folded his paper and turned to Merlin.

"Can you imagine that?" he said. "Just fifteen years ago, a White House statement says that. What were they using for brains?"

"What good does it do to keep re-reading that sort of thing?" Merlin said dully. "It doesn't change anything."

"But how could anyone be so blind?"

It was a trite question. Merlin felt no urge to answer, but he was not surprised to hear it asked. Although probably his own age, the other man had the kind of appearance that made him seem barely out of adolescence. Curly black hair, slight body, pale face—an innocent in a time when inno-

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of the slave market,
the air conditioning barely
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this was his special day. •*

cents got eaten for breakfast. Merlin had never seen him before.

"Does it matter now?" Merlin finally said.

"There'd still be a chance for this country if..." the other broke off. "Oh, my name's Sam Church. My degree's in electronics. How about you?"

"Flow mechanics, gravityless."

"Gravityless? You must really have thought you'd make it with an off-world job. But don't you know you shouldn't wear good clothes for this kind of place? No telling what kind of work they'll offer you."

The assumption of experience by someone obviously new here irritated Merlin enough to rouse him from the chronic fatigue he shared with most adults nowadays.

"I'm dressed like this because I've got a job interview this afternoon," he said. "In my own field."

He was sorry he had mentioned it, the moment the words were out of his mouth. Sam Church's pale face was suddenly wiped naked of pretension; it was now desperate with longing.

"Oh, God!" Church breathed. "You really have an interview?"

"I've been waiting nine months," Merlin said gruffly. He was sorry now he had talked to this man at all. Luckily, Church seemed to be the only one who had heard his mention of a professional job interview. They were all in the same straits. Church lowered his voice.

"Where? Who with?"

"International Positions," Merlin said. "One o'clock."

"God!" said Church again. He sniffed the air. "You took a shower, too."

Merlin's small, bitter laugh caught in his throat.

"Not damn likely!" he said. "I used the washbasin on my crash floor, and it cost me three hundred for five minutes. My own soap and towel, and a hundred to hire somebody to stand guard."

Church's attitude had changed. He was now utterly the awestruck neophyte looking at an old hand.

"You're office-crashing?" he said. "How dangerous is it?"

"If you know what you're doing, it's workable," Merlin said.

"You carry a knife?"

"Of course," Merlin felt trapped by the conversation but unable to think of a way to change the subject. "That doesn't mean much. There's always someone around who's better with a knife. The real trick is knowing who's sharing the office with you, and all of you take turns on watch. You've got to know how to wheel and deal with the hall-patrol guards, too."

Church breathed out softly. He looked enviously at Merlin's large frame.

"I couldn't do it," he said.

Merlin looked at him. He was quite ready to believe that the other could not do it, would not be able to survive in one of the empty office buildings that had been converted to dormitories. Only the fittest survived very long.

"Where do you live?" he asked, to change the subject.

"I've only been married five months. My wife and I, we've got a room with my in-laws."

"Wife..." Merlin caught himself just in time. He had had a sudden, unbearably poignant, vision of someone to go home to, only one other person and a room where you could be alone, just the two of you.

"You're married too?" Church asked.

"Yes. She's on the west coast."

"Oh."

Church did not make the mistake of asking more than that—there were limits even to his innocence, apparently. Many families had been split by the galloping inflation and the lack of jobs.

"Do you hear from her much?" Church asked.

"No."

The monosyllable finally stopped Church's questioning. They sat a while longer in silence; then, glancing at the clock, Merlin saw that it was almost noon. His mindless period had lasted longer than it seemed. He stood up, went over to the

desk and told the clerk he was checking out.

"Right." The clerk punched keys on his computer terminal, not looking up. As he turned away from the desk, Merlin bumped into Church, also on his feet.

"I haven't gotten anything all morning here, either," said Church. "Do you mind if I walk along with you?"

"Yes," said Merlin.

Church blinked. "Yes? You do mind?"

"That's right. No company."

"Oh," Church fell back. Merlin turned and went past him and out the door into midday heat that was now like radiation from the hearth of a blast furnace.

He walked back the way he had come, downtown toward the International Trade Center. On the way he stopped at a discount market and bought a quarter-liter foil package of uncooked Quaker Oats for eighteen dollars. A small detour took him to Almsbury Park, where he ripped open the package and ate the dry oats by the handful, washing them down with water from a public fountain. The oat flakes, under their dustiness, had an almost nutty taste. They were the most food available for the money, and he felt better with something in his stomach. "Courage is food; food is courage." Someone had told him that when he was young.

It was nearly one o'clock. He went on to the International Trade Center, to the office of International Positions, and gave his name to the receptionist.

"Oh, yes." She checked her computer screen. "Mr. Ghosh will see you. Just a few minutes ... if you'll sit down."

It was, of course, more than just a few minutes. His mouth began to feel dry from the oat flakes, and he got to his feet.

"Would I have time to find a drinking fountain?" he asked.

"I'm sure you will," she smiled at him. She was thin, in her forties, and in spite of having a steady job, she seemed prey to inner anxiety. "There's one just outside, to your left."

He went out through the glass door and found the fountain. After drinking, as he straightened up, he heard a throat cleared behind him. He turned to see Church standing there.

"I hope you don't mind," Church said. "I just wanted to see how you'd come out ..."

Under his immediate irritation, something he thought he had long since repressed, something dangerous—sympathy for another human being—stirred in Merlin. Church was so helpless, so inoffensive, it was impossible not to feel sorry for him.

"All right," said Merlin. "But don't hang around here. Wait for me outside and I'll tell you about it when I leave."

"Thanks," said Church, looking up at him. "Really, I mean thanks!"

"I'm not doing anything special for you," said Merlin. He went back into the office.

"Oh, good. There you are," said the receptionist as he stepped through the door.

"Hurry! Mr. Ghosh is waiting for you. Straight ahead and to your right!"

Merlin hurried into the corridor beyond her desk and found his way to the open doorway of a wide room, brightly lit by a wall-wide window. The room was pleasant with air conditioning and the green of potted plants. Behind a wood-and-chrome desk sat a dark-skinned man in his forties, wearing a chalk-striped blue suit—the value of which would have given Merlin financial security for a year. *Ram Ghosh*, said the nameplate on his desk. But his eyes were not unkind, and he did not exhibit the condescension, the air of veiled exasperation and impatience with Americans, that so many foreigners showed these days.

"Mr. Swenson? Sit down, please." Ram Ghosh's English was almost accentless, with only a slight prolongation of the vowels. Merlin took a chair. Ghosh tapped the papers on his desk with the nail of an index finger.

"Six months," he said. "You've waited a long time for a job offer from us."

"Lots of people wait longer," Merlin said.

Ghosh smiled at him, a little sadly.

"Yes ..." he said. He became more brisk. "Well, the matter at hand is that you now have an offer. Your education was in null-gravity flow mechanics, I see. But no experience?"

"They aren't hiring many U.S. citizens to work outside the atmosphere these days."

Merlin knew his bitterness was showing. He felt a twinge of fear at the thought that he might already have prejudiced the interview, but the words had come by themselves before he could stop them. Ghosh, however, did not seem offended.

"Very true," he said, nodding. "But you can't blame off-Earth installations and factories for giving first chance to their own nationals. Many people, you know, want to work in space these days."

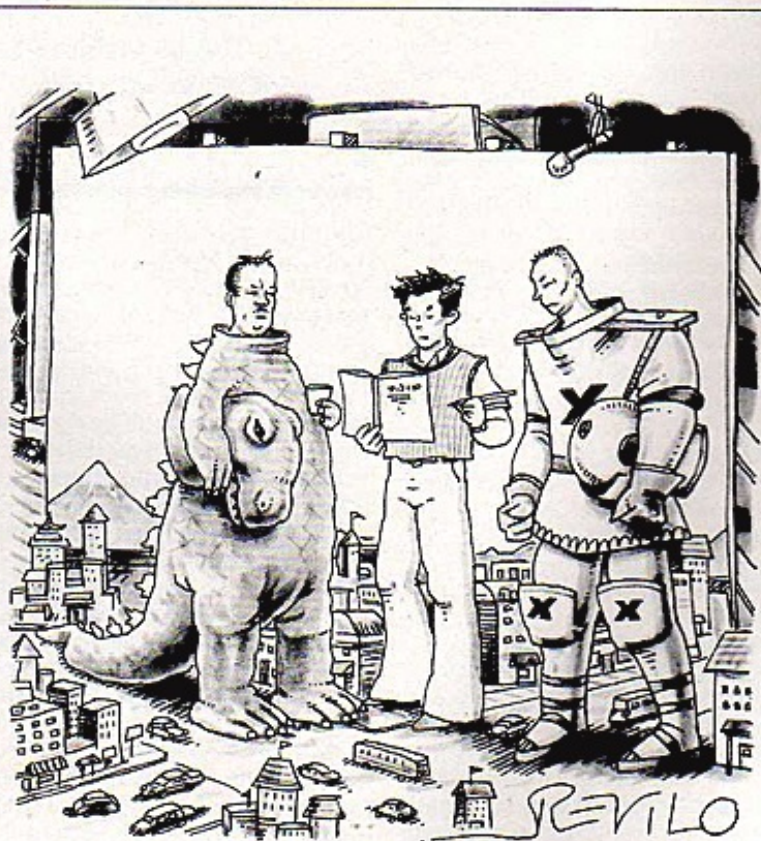
As many, thought Merlin, as want to enter heaven.

"No experience," Ghosh went on. "Well, we could wish you had. But, in this case, the fact you don't isn't a complete barrier. I can offer you a job in your specialty. But I warn you to treat this offer, and all information concerned with it, as a matter of secrecy, whether you accept the job or not."

Merlin felt an icy shock that gave way to a glow of hope so powerful that he feared it showed on his face.

"Of course," he said, slowly and clumsily. "Professional confidentiality ... I understand."

"Good," said Ghosh, smiling again. "All right. The job will be in the metals-forming group of an electronics research unit to be placed in high orbit in the next two years. Your work would be classified and would have to be explained to you later if you accept the job. But it's within your ability and education, and you'd be paid at going rates for a space-qualified engineer of your



"Okay, monsters, listen up! We're running over budget. So let's try to destroy Tokyo in one take."

specialty and experience . . .

Merlin's mind reeled. The pay rate Ghosh was talking about would make him comfortably well off in any other society in the world. Here in the U.S., it would make him wealthy, by comparison with those at the income level at which he had been living for the last five years.

"I should say, that's what your pay rate would be once you were in orbit and on the job," Ghosh continued. "During your training period, here on the surface, you'd be paid at a standby rate of half your space-borne pay. Should you accept . . ."

In a euphoric daze, Merlin found himself signing papers, shaking Ghosh's hand and receiving congratulations as a new employee of something called Trans-Space Electronics.

"You'll report to the training center in Huntsville, Utah," Ghosh said. "The receptionist outside has all the necessary information, transportation vouchers and the rest . . ." He coughed. "If you could use an advance on your first month's wages . . ."

"I . . . yes," Merlin said. He had been so overwhelmed by good fortune that he had completely forgotten he would need decent clothes, luggage, a dozen other things he had once taken for granted but no longer owned.

"My secretary can give you a check for up to a third of your first pay period's wages."

"Thank you," said Merlin. "I don't know how to thank you."

"Not at all," Ghosh smiled. "I must admit I like this job. I've had less happy ones. If you know of anyone else whom you think might work out for us . . ."

"I'm afraid not," Merlin said quickly. The hard years had taught him not to recommend anyone. There was too much risk; the other person's actions might recoil against one's own record. Life had become too brutal for casual favors.

They shook hands and Merlin went out. With the advance check and other materials in hand, he stepped back out into the lobby of the Trade Building. For a moment he hesitated, his mind whirling, unable to think of what to do first.

He turned toward the drinking fountain. The cold water tasted like expensive wine. Then he saw Church.

"I got the job," said Merlin.

"God!" said Church.

"Engineering, in my specialty," said Merlin. "Half-pay at the trainee level until I go into space, then full pay."

Church said nothing, but there was a look on his face—one of incredulity and envy and disbelief, all mixed.

And it was a look that touched Merlin's inner core. In this moment of incredible happiness, he saw himself standing where Church was, hearing of someone else's good fortune. He knew too well what the other must be feeling. Impulsively, he spoke.

"You've got an electronics degree, you said?"

Church nodded, his face suddenly wary. "Go in there right now," said Merlin. "You may be able to get hired yourself. Tell the secretary you heard about it at the post office—anything. Just don't tell them I sent you. The name of the outfit is Trans-Space Electronics. Remember, you didn't hear about it from me."

Church stared as if he had just heard some unknown language. Then his eyes opened wide. He spun on his heel, ran to the entrance of the offices and let himself in.

Merlin departed, clutching his check and the other papers.

His transportation vouchers got him on the evening flight to Salt Lake City. He boarded carrying a new suitcase with nothing but his old clothes and shoes in it. After being so poor for so long, he found he could not bring himself to throw things away.

It was only the first of his conflicts with the unconscious habits of near-starvation.

• Behind a wood-and-chrome desk sat a dark-skinned man. But his eyes were not unkind and he did not exhibit the condescension and impatience with Americans that so many foreigners showed these days... •

When he got to the training camp at Huntsville, he found the Reception Center closed for the day and only the thought of the consequences to his employment record, if he should be picked up for vagrancy, drove him to a hotel. There, in the palatial privacy of his single room, in the luxury of his mattress bed, he finally fell asleep.

In the morning he reported to the Reception Center. He was put through processing, presented with a schedule of refresher and training classes and assigned to a barracks with other new employees. The barracks were two-story wood frame buildings, with a large dormitory room upstairs and a day room and a latrine downstairs. White partitions surrounded the individual beds in the dormitories, giving each employee the privacy of a tiny cubicle.

There were no women in the barracks. He was told that new employees were segregated by sex, even those husband-and-wife pairs who had signed their five-year employment contracts together.

In the latrine he found showers in which hot water was available day and night. Soap and towels were provided. Although he understood that this must be charac-

teristic of newcomers like himself, he was unable to resist the luxury of immediately soaking himself in the shower.

He was stepping out of the shower when he saw a familiar-looking man standing at one of the washbasins. He circled to get a glimpse of the other's face, reflected in the long mirror above the washstands. It was Church.

"You made it!" he said.

Church turned around.

"Yes, I made it!" he said. They shook hands solemnly.

"I didn't see you at any of the processing sessions," Merlin said, wrapping a towel around his waist.

"I had some special interviews," said Church. "I'm to be considered for cadre. It could mean a move to better quarters."

"Cadre?" Merlin stared at him. "I thought all cadre would be previous employees."

"I think they'd rather have it that way. But this project's expanding so fast . . ."

"But how did you get picked for that?"

"Well . . ." Church looked at the open door to the latrine. He stepped over so he could see through it, then stepped back again. "I think they picked me because I told them I'd had experience. Didn't you?"

"How could I? I haven't ever been in space."

"Well, neither have I, of course. But it doesn't hurt to fib a little. By the time they check, they'll have already tried you out in a position. If they like what you've done, then it doesn't matter, and if they're displeased, then you just tell them you didn't understand the original question or blame it on computer error. They're not going to go to the trouble of checking personally with whoever it was that hired you."

"It could still catch up with you," Merlin said.

"Oh, I don't think so," Church's manner was almost airy. "Well, I've got to run. One of the advantages of being considered like this is that I can phone from the offices, instead of standing in line like the rest of you. I told my wife I'd call."

"Yes, see you later," said Merlin.

He watched the other man go. Later, dressed and standing in line himself at the phone booths in the communications building, he felt his first touch of envy. Even if Church's lie caught up with him, it was almost worth it not to have to wait here like this. The camp had a direct satellite hookup. Long-distance phone charges could be put against your first six-months' salary. Everyone just hired was desperate to talk with someone, with the mail as unreliable as it was and the cost of ordinary phoning astronomically out of reach.

He got to a phone at last and called everyone he could think of on the west coast who might know where his wife could be reached. But, as he had half-expected, he learned nothing. With his last call he hired a detective agency in San Francisco—another indulgence that would have been impossible two days before, but his only real chance of finding her. Ona had no

engineering degree, but there might be other work openings on this space factory. Even if that did not pan out, his own salary would be enough to make life secure for her, and once a year he would be getting furloughs to come back and see her.

He returned to the barracks, looked for Church's cubicle and found him sitting on his bed, talking with two of the other trainees.

"Oh, hello, Merlin," Church said, looking up. "Come in and shut the door. We're just comparing notes on the situation here."

He introduced Merlin to the other two: a middle-aged, slightly overweight man named Stoller Fread, with the patient face of a basset hound, and a blond young man named Bill Sumash, who looked as if he was just out of school. The comparing of notes Church referred to was clearly a gossip and rumor session. Merlin sat on a corner of Church's bed and listened.

"Oh, it's a scam," Church was saying. "The idea's not so much to set up a factory station in orbit as to get their share of U.N. development funds for nations with low GNP like ours."

"But," said Stoller, "the U.N. doesn't fund private corporations."

"This isn't a private corporation," said Church. "It's a consortium of corporations with federal backing. As that, of course, it still can't get U.N. funds directly, but the federal government can, and then make funds of its own available to the consortium."

"But that's a great thing, isn't it?" said Sumash. "It could be the beginning of a national space-based industry, after all."

"Don't be a dupe," Church said. "This country's too impoverished to maintain a space-based industry. If we'd already had one—if the government had pushed one when they should've, twenty years ago—we could be in a position to compete nowadays. But we're not."

"We dropped out," said Sumash. "Now we don't have the chips to get back into the game."

"The point is that the U.S. lost the original virtues that made it what it was," Church said. "And like an old, fat-bellied ex-athlete, it wouldn't exert itself while a bad situation ran downhill and got to be a situation nobody could get out of. You're right, you know, we don't have the chips to get back into the space game—and we never will. Our golden age is gone."

Merlin got up. He had heard all this too often. It was all true, but life had no room for such large concerns now. Life was lying in the blessed privacy of his cubicle and a dream about Ona being found by the detective agency, and of their being together again.

"Sorry," he said to Church, "I can't keep my eyes open. Next time..."

He nodded to the other two as he stepped to the door of Church's cubicle.

"Glad to have met you," he said, and a moment later he was out on the barracks floor, headed for his own cubicle and

peace.

The next few weeks were filled with classes and training. He found himself going to bed exhausted every night. He did not miss Church, so it was something of a shock, when he was next in the central administration building, to see him there, dressed in a regular civilian office suit. Merlin had come in to get approval for a draw against his wages to pay the detective agency.

"Church!" he said, as the other walked hastily by him in the corridor. "Sam Church!"

Church looked around and saw him. He came over to shake hands.

"Merlin!" he said. "How're you doing? I meant to get down to the barracks and look you up, but they've got us all so busy here on planning..."

"You did make cadre, then!" said Merlin.

"Good for you!"

"Thanks," said Church. He lowered his voice and looked around, but the corridor

“The point is that the U.S. lost the original virtues that made it what it was,” Church said. “And like an old, fat-bellied ex-athlete, it wouldn't exert itself while a bad situation ran downhill...”

was momentarily deserted. "I really was going to get in touch with you, in fact. Working in this place, I hear about things ahead of time. They've got wind of some agitators in the trainee corps. They're going to begin making inquiries tomorrow. I wanted to warn you."

"Me?" Merlin laughed. "I don't know any agitators."

"Of course not. I don't think there actually are any. That's why I was going to warn you. Investigations like this are under pressure. They've got to produce results to justify whoever authorized them. That means they're going to be picking up on anything at all that can be made to seem socially destructive. You remember how you sat in on some of those sessions in my cubicle..."

"Once," said Merlin.

"Only once? Well," said Church, "at any rate, you know how harmless they were. I've already told the investigation team all about them and no one's worried. But just the same, you might want to say you didn't know anything about them..."

Merlin stared at Church. He had not thought of the other man in the role of pro-

tector, and he felt embarrassed at not giving Church more credit. In a way this warning repaid the favor Merlin had done him by putting him on the track toward getting his job. It testified to an awareness of obligation in Church that Merlin had not expected.

He got the contingency payment approved and stood in line at the phones to tell the detective agency.

"Fine, fine!" the voice of the woman at the agency crackled in his ear. "I think we've just about located your wife, Mr. Swenson. With this payment against expenses we should find her this week."

"Splendid," said Merlin. "You'll call me?"

"As soon as we've got something to report. Now, Mr. Swenson, it was explained to you that your payment in full would have to be in our hands before we released any hard information?"

"Of course," said Merlin. "I've already talked to my employers here, and there'll be no problem getting an advance for the rest. They just want to be sure I've really found her, and they won't have to turn around and give me another advance next week."

"Good. We'll be calling you this week, Mr. Swenson."

He went back to the barracks, his mind full of Ona and her happiness when she would learn what had happened to him.

He had completely forgotten about Church's warning, when, two days later, he was called out of class with orders to report to Conference Suite 460 in the Headquarters Building. Suite 460 turned out to be a spacious room with a long table capable of seating perhaps sixteen people. But when Merlin stepped in, the only ones there were a fiftiesh, tired-looking man and a woman of about the same age, raw-boned and with graying red hair. They were seated side by side at the far end of the table.

"Come sit here, Mr. Swenson," said the woman. She pointed to the first chair on the long side of the table, at her right. He obeyed.

"Now," said the woman, glancing at a printout sheet before her. "Of those trainees presently in your barracks, Mr. Swenson, were there any you knew before you came here?"

"No," said Merlin. He did not have to stop and think in order to answer. "No" came automatically to everyone's lips these days. It was a "yes" answer that called for thought and hesitation.

The woman looked again at her printout. So far the man had said nothing. It occurred to Merlin that the psychological profile they had worked up on him might have indicated that he was more likely to trust a woman.

"Do you know a Stoller Fread or a Bill Sumash, Mr. Swenson?"

"I think they're in the barracks."

"This Fread and Sumash," the woman said, "have you ever noticed them talking together, or attempting to gather others in the barracks to talk?"

"No," said Merlin.

"Have either of them ever tried to talk to you privately, Mr. Swenson?"

"No," said Merlin. "Not that I can remember, anyway."

"Do you know anyone here whom you might have cause to suspect as an activist or subversive?"

"I'm afraid," said Merlin. "I've been so busy with the training courses, I haven't really had a chance to talk with the others much."

"Yes or no to the question I asked, Mr. Swenson?"

"Definitely no," said Merlin. "I haven't met anyone like that."

"But you'd tell us if you did, wouldn't you, Mr. Swenson?"

I'd tell you anything I needed to, true or false, thought Merlin grimly. I'd cry, dance, or crawl on the floor to keep this job, now that Ona's almost found.

"I surely would," he said aloud.

"Thank you," she said. The man continued to sit. With eyes pouched in finely wrinkled flesh, he silently studied Merlin.

Merlin was released, finally, and the next few days went by swiftly. He struggled with his training courses and impatiently wondered when the detective agency would phone with word of Ona's whereabouts.

But no call came. On the Thursday after his security interview, he discovered a memo in his message box that asked him to report to the Payroll Center at nine o'clock the next morning.

He assumed it must have something to do with the last advance against his wages. Annoyed that he would be late for his second class of the morning, he hurried to the Center, hoping that whatever it was would not take too long.

At the Center he was directed to the Pay-Outs Cashier. Only one window was open, with two security guards standing nearby. Merlin stood in line behind three men, two of whom were cadre. From their conversation, he assumed they were here to get an advance on wages. The third man merely signed a form and left. Now Merlin was facing the clerk behind the window.

"Merlin Swenson?" asked the clerk. He searched below the counter level on his side and came up with two pieces of paper.

"Sign this," he said, pushing one ahead of the other at Merlin. "The second one you keep."

With his pen poised in his hand, Merlin read the first paper.

"I, Merlin James Swenson, acknowledge the following indebtedness to Trans-Space Electronics Corporation, Limited:

Advances:	\$43,432.54
Per diem:	22,806.00
Equipment issued:	28,099.10
Miscellaneous:	9,847.78
Subtotal:	\$104,185.42
Less trainee wages to date:	60,765.70
Total:	\$43,419.72

Signed

"What's this?" Merlin asked.

"Just your account to date. We need a signature."

"All right," said Merlin.

He signed. The clerk took back the form and separated a top copy from a bottom one. He pushed the bottom copy to Merlin, along with the other paper.

He took both sheets and started to turn away, glancing at the second paper. Suddenly, he stopped and turned back.

"What's this?"

"I just hand it to you, that's all," said the clerk. He turned and walked out of sight inside the cage.

Merlin stared at the second paper.

Termination Notice

As of the present date ... the lines blurred in Merlin's vision, then came back into focus, ... services no longer required. After advances and expenses of the Corporation, it has been determined that the balance of your employee account with

• He was facing one of the gray-uniformed security guards. The other guard was holding Merlin's arms in a painful backlock. A dull throbbing had already begun in the socket of each shoulder. •

Trans-Space Electronics shows an indebtedness of \$43,419.72. Payment should be made within three months, or arrangements must be made at the end of that time to repay any amount still outstanding ...

"Come back here!" Merlin shouted through the window—and found himself seized from behind, his elbows pulled toward the small of his back and his whole body wrenched away from the window.

He was facing one of the gray-uniformed security guards. The other guard was holding Merlin's arms in a painful backlock. A dull throbbing had already begun in the socket of each shoulder.

"You subverts are all alike," said the security guard facing Merlin. "The minute things stop going your way, you start yelling and pretending you're being picked on. Well, you're fired and you're leaving. How do you want to go? It's up to you."

Merlin choked back the bubble of fury in his chest.

"I'll go easy," he said.

"Good," said the guard. He nodded, and the other guard released Merlin's arms.

"Let's go."

They marched Merlin to the door of the building, put him in a gleaming white car bearing the Trans-Space emblem on its front doors and rode with him to the compound by the entrance gate where personnel on pass waited for the hover-bus into Ogden.

"Who've you got there, Gus?" called the guard at the gate.

"Another of them," Gus called back. He and his cohort walked a small distance off and stood together, talking and glancing at Merlin from time to time.

Merlin turned his back and stared out through the heavy wire mesh that fenced the compound. Beyond, he could see the warehouse buildings of the supply area, gray silhouettes in the morning sunlight.

"Merlin!"

He looked around, but saw no one.

"Merlin, over here!"

He looked down along the fence to his left. About ten meters away was a gate, now padlocked. Merlin glanced at the guards, but they seemed indifferent to the situation. He walked along the fence until he saw Sam Church's face looking between the vertical iron pipes that supported the gate-door.

"Merlin ...," he said. "I got here as soon as I could ..."

"I don't know what's happened. They're kicking me out without a chance to talk to anyone!" Merlin clung to the bars. "It has to be a computer error, or something like that. But how do I do anything about it when they're running me out like this, without a chance to talk to anyone?"

"You can't, of course ...," Church began.

"Sam, listen! Try and get to someone! You're cadre. You can find out what went wrong and fix it, can't you? Sam ... can't you?"

"Well ...," said Church.

"You've got to! Don't you know what this means? It's not just this job. What outfit, anywhere, is going to hire me for anything but slave labor as long as the records here say I was a subvert? I've got to get it straightened out! What's the matter with you, Sam? Won't you even try?"

"Oh, I'll try," said Church.

"And something else—something else you can do for me right away, Sam, and it won't be hard. Not for you. You know that detective agency I had hunting my wife? They called, just Monday, and said they'd almost found her, that they'd be calling this week to tell me where she is. Sam ..."

He fumbled in his shirt pocket and came up with a pen and a piece of paper. He scribbled on the paper and passed it between the vertical pipes into Church's hands.

"It's easy for you to phone out. Call them, Sam. Don't tell them what's happened to me, but tell them they can reach me at—they can leave a message at ..."

He stopped and searched his mind desperately.

"I know!" he burst out. "You remember

that slave market in Minneapolis, where you first met me? The Availables, Fifth and First Avenue North? Tell them they can leave a message for me there. I'll be back Monday. I can pay off that dayclerk, and he'll go along with it."

"All right," Sam Church looked at him strangely.

"And another thing you can do for me..."

He was interrupted by the roar of blowers as the bus turned a corner into the compound.

"All right, Swenson!" shouted one of the guards. "Get over here!"

"Sam, listen, if you have a chance..."

"There's no more time, Merlin." Church was thrusting a white envelope at him between the pipes. "It's not much, but it's all I could raise in a hurry."

Merlin took it automatically. The guards were coming for him. There was not even time to take Church's hand.

"I'm sorry, Merlin," said Church. "I'm really very sorry. I couldn't help it. I have my own wife to think of."

The guards grabbed Merlin, whirled him around and marched him toward the bus. Dazedly, he found himself aboard.

"Company billing, Jake," said one of the guards. "This one to Denver Central. If he gives you any trouble, let us know."

They stood back. There were no other passengers boarding. The doors of the bus closed with a pneumatic hiss. The driver lifted the vehicle on the downward thrust of its underjets until it floated free. He turned it in its own length and headed toward the highway.

Merlin, catching at seatbacks to keep his balance in the turning bus, stumbled to the mid-section of the vehicle and sat down. Only then he realized he was still clutching the envelope that Church had given him. Numbly, he opened it. Inside were twenty hundred-dollar bills.

He laughed bitterly. This, together with the twenty-five hundred or so he had in his wallet, might be just enough to buy a bus ticket back to Minneapolis. He would have to take a bus to get there by next Monday. If you were caught hitchhiking, the police either beat you up so badly that you ran the chance of being crippled, or shot you on some pretext or other to save themselves the trouble of beating you up.

He tucked the envelope into an inside pocket. His old work clothes and everything else he owned were getting farther behind him by the minute. Once back in Minneapolis he would have to work in what he was wearing now—for as long as it stood up. Ironically, he had been saving his good new shoes lately by wearing his old ones with the paper-thin soles; he had found out that the instructors did not care. Shoes would be a critical matter once he went back to daywork. The money that would buy his bus ticket could be used to purchase a pair of heavy work boots instead. With those, at slave markets in Denver, he could last indefinitely. Given enough time, anything could happen. He could be

reinstated with Trans-Space, if Church could get to the right person—

His thoughts broke off suddenly as he remembered Church's parting words. What had he meant by saying he couldn't help it—that he had his own wife to think of?

Understanding exploded in Merlin.

"The bastard!" he screamed.

He woke to the fact that he had half-risen out of his seat. Remembering where he was, he sank back down again. The few other passengers on the bus and the driver, in his rear-view mirror, were all staring at him.

Merlin sat stunned, the whole pattern taking shape before him like a puzzle picture that suddenly becomes comprehensible. He remembered how Church had lied about having space experience in order to qualify for the cadre. He remembered Church wanting to walk downtown with him to his interview. Church meeting him there after all—which he could only have done if he had followed Merlin—and wanting to hang around and see how this perfect stranger made out in an interview. Merlin remembered the look of terrible longing on Church's face when Merlin told of his own good fortune. How many times, he wondered now, sickened, must Church have used that look on other people?

He should have been on his guard when Church warned him to deny having been at any of the obviously subvert talk sessions in Church's cubicle. The meaning of

Church's last words were clear. He had insured his own job security by throwing the corporate people a substitute victim and telling them that victim would deny everything when questioned. Then he made sure by advising Merlin to do just that.

A deep wave of rage erupted in Merlin. It rose, crested, and broke. But fury was useless. Church was out of reach—and he had always been just what he was. The way life was now, it had been up to Merlin to protect himself—and he had failed to do so. He remembered, in The Availables' slave market, how he had taken Church for an innocent. Not Church. He, himself, had been the innocent.

Fifty-six hours later, at midnight, he stumbled off the Greyhound bus at the Minneapolis terminal. He had enough money left for a week's crash space in one of the office buildings—but this late at night, he would be taking unreasonable chances. His roommates might be relatively honest, but any stranger was fair game for the pack. Better to take his chances on the streets than pay to lie awake all night with his eyes open.

He headed east toward the University area, where people would be on the streets all night. The time had been when someone like himself could ease his way into a party of students, go back with them to whatever apartment, room or warehouse they were headed to, and pick up free crash space by pretending to pass out in a corner. But



those easy days were gone. The best to hope for was to stay on the streets without attracting the attention of the police.

But this night the University district was swarming. He had the incredible luck to catch on with a student party that ended up down in the park along the Mississippi riverbank. Anyone but students would have been roused out of there by the police. But they were left alone; and so he made it through until Monday, and was waiting first in line outside the door when the slave market opened at six o'clock that morning.

The clerk came up the street to the door, recognized him as a familiar face and grunted at him sleepily before unlocking the door and letting them all inside. He took his time, yawning as he set up for the day. Finally, he was ready, seated behind his computer screen and keys.

"Name?" he said ritually, not glancing up.

"Merlin. Merlin Swenson. Did a long-distance phone call come here for me? Now look," said Merlin, swiftly, "I know this isn't the sort of thing you do, but I can reimburse you for your trouble. Did a long distance call come in here for me, Thursday afternoon or Friday?"

"Maybe," said the clerk and looked sour. "It was collect. I had to pay two hundred and eighty to accept it for you."

"Two hundred and —"

"Look, man!" said the clerk loudly. "You want to stiff me on money I've already paid out for you, that's all right. I'll live. But don't

come around here again asking me to put you on somebody's payroll. Deadbeats like you don't deserve jobs."

"All right!" said Merlin, low-voiced. "I'll pay! What's the message — and tell me privately or it's no deal!"

"You come into the office with me," said the clerk, still loudly.

He stood up from behind his desk and opened the half-door in the barricade that joined his desk to the wall on either side of it to create a small privacy space. Merlin walked in and followed him through a door in the back wall to a tiny office.

"Here you are," the clerk said. His tone was cheerful and friendly once the office door had been closed behind them. He pulled down a sheet of paper that was thumbtacked to a cork bulletin board. "I didn't understand a word of it, but I figured someone like you would be along asking for it. That'll be two hundred and eighty."

He kept his grip on the paper until Merlin had counted over the money. Then he held it out in his fingertips. Merlin snatched it.

"This is no message!" said Merlin. "It's only a telephone number!"

"You expected more?" The clerk was curious. "That's all they gave me."

"But now I've got to call them long distance!" said Merlin. "And you cleaned me out. I don't have any money left!"

"Call them collect," advised the clerk.

"I can't call collect to a detective agency," said Merlin, desperately. "And I've

got to reach them. It's a west coast outfit that's been locating my wife, and they were to phone like this when they found her."

"Sure, you can call collect," said the clerk. "For another two hundred, I'll show you how."

"Don't you understand?" said Merlin desperately. "You cleaned me out. I'm broke! Do you think I'd be standing in line here if I had more than what I gave you already?"

"Oh, what the hell!" the clerk said. He left the table, sat down before the phone terminal at the desk, and punched buttons. The screen lit up with the face of a young man.

"Yes?" he said, "who's calling collect, please?"

"Merlin Swenson, The Availables," said the clerk.

"I'm sorry. I don't have any Availables or Merlin Swenson on my list to accept."

"Well then, just forget it, man. Forget it!" barked the clerk. "You people called here. If you don't want to talk to us, we sure don't want to talk to you!"

"Are you Merlin Swenson?" asked the young face. "If you're Merlin..."

"Me? Merlin Swenson? You people must think a lot of yourselves. Merlin Swenson doesn't answer any outfit that calls and leaves word for him to call back. Let me talk to whoever called him, and I'll decide whether it's something to bother Merlin Swenson about."

"Just a minute," said the face, "let me check with..."

"Never mind. Forget it!" shouted the clerk, and waved off Merlin with one hand. "I've wasted enough time with you already, and all you've done is stall..."

"Wait. Wait just a minute," said the other. "I think it was Maria Balsom who wanted to talk to Merlin Swenson. Just a minute..."

The screen went blank for a moment, then the face of the woman Merlin had spoken with before at the agency came on the screen.

"Hello? Mr. Swenson?" Her face was puzzled.

"One moment," said the clerk. He slid out of the seat and Merlin replaced him.

"I don't understand, Mr. Swenson," said Maria Balsom. "we don't accept collect calls from clients who owe us money..."

"Have you found her?" The words burst from Merlin.

"Of course. That's what we called you about. Then we had a message to find you at this number, so we called and left word for you to call us. But you were not being invited to call us collect. As I say, we don't accept calls from..."

"Where is she?"

"Really, Mr. Swenson. You don't expect this agency to furnish information before it's paid? You've got a balance outstanding of fifteen thousand, four hundred and eighteen dollars and twelve cents. If you'll make your payment to us in that amount..."

"But that's why I had to talk to you," Merlin said quickly. "You see, just for the next week or so, there's been a little hitch. There was a



"That's my present wife, and the other's my wife from a previous life."

crazy mix-up in my computer records, and until it's cleared up, they're holding up my ability to get advances of the kind I've been paying with. It's just a temporary thing because they're understaffed in the records section, but it'll hold things up for a couple of weeks. But I have to make a decision about housing my wife while I'm in orbit, and I need to talk to her about this right away. So I thought if you could just let me know what you've turned up so far—after all, I have paid you over thirty thousand dollars already..."

"Mr. Swenson..." Maria Balsom's voice had stepped far back from him. "Are you telling me that you're not connected with Trans-Space any longer?"

"Yes and no. The point is, I can't pay your bill right now, but if you'll wait..."

"Of course," Maria Balsom's voice came now from a different world. "When you've got what you owe us, Mr. Swenson, send us a credit voucher, and we'll be glad to give you the full results of our investigations."

"Don't you understand..." Merlin began.

"I understand perfectly, Mr. Swenson. Do you?" said the woman, grimly. "Like everyone else in this business I live on my commissions from accounts collected!"

She broke the connection.

"Well, there you are," said the clerk. He slapped Merlin on the shoulder. "Come on out and I'll find you a job with some overtime."

Merlin shook him off. He stalked out of the office, out through the half-door, past the other day-laborers still lined up at the counter, staring at him, and out of the building.

The heat of the day was stifling as he hurried away from The Availables office. He paid no attention to where he was going until he felt grass beneath his feet and looked around at Almsbury Park.

He stared about like someone just awakened from a heavy sleep. At this hour of the day, the park was only sparsely occupied. The nearest bench to him, half in sunlight, half in shadow, had only one person on it, a very old man, apparently asleep on the end in sunlight that was growing hotter by the minute.

It was a consolation prize of fate. The shady ends of the bolted-down benches were normally occupied on a hot summer day like this. Merlin gratefully sat down in the shade.

An empty hour passed. But then, slowly, little by little, the desire to live crept back into him like a dull ache. Life was still with him. Everything was lost, but his heart still beat. His chest still pumped. In a few hours—whatever else might happen—he would be hungry again. And soon after that, he would once more need to sleep.

The heat of the advancing sunlight against the thin sole of his right shoe roused him from his thoughts. Any day now, he thought, the sole would wear through and there would be no replacing it. The day was heating fast, and the shadow in which

he sat had retreated until it could not much longer protect him. He felt chilled in the midst of heat, naked and lonely.

He squinted along the bench at the old man, still sitting squarely in the sunlight. The other looked very old and weary. A lifetime of outdoor living had once darkened his skin to the color of old leather, but age and general debility had paled and faded the leather-tone to a gray shade. The bones of his face seemed unnaturally large under the thin mask of old skin. A white stubble blurred the outlines of his lower jaw and his wrinkled eyelids rested on his cheeks. He did not move, but his chest stirred slowly under his heavy checked shirt, its colors—like his—grayed by time.

Merlin leaned toward the man, at which the smell of death came faintly into his nostrils. A wisp of feeling he thought he had lost, stirred within him.

"Why don't you move this way?" he said to the old man. "There's still shade enough for both of us at this end."

There was no answer. He said it again. "Leave me be," said the other, without opening his eyes.

"The sun'll kill you."

"It feels good."

They sat together. It was not much, but Merlin's racking loneliness had eased slightly with the exchange of those few words with the weary figure beside him.

"I'm at the end of my rope," Merlin said. "You know how it is?"

"I know," said the old man, after a long pause. It was as if he were so far off that the sound of Merlin's voice took some time to reach him.

"I'll never find my wife now," said Merlin. "I'll never get a job now. It's all gone. That's the worst part, knowing there's no use. Once, I had hope, but now..."

He found himself telling the old man all about it. There was no one else to tell, and he had to tell someone. The old man sat in the sun, smelling faintly of death. He said nothing. As Merlin talked, a fly circled and landed on the pocket of the old man's checked shirt. It stayed there, resting with the old man in the sun.

"You see," Merlin went on, "there's nothing to be done. Nowhere to go."

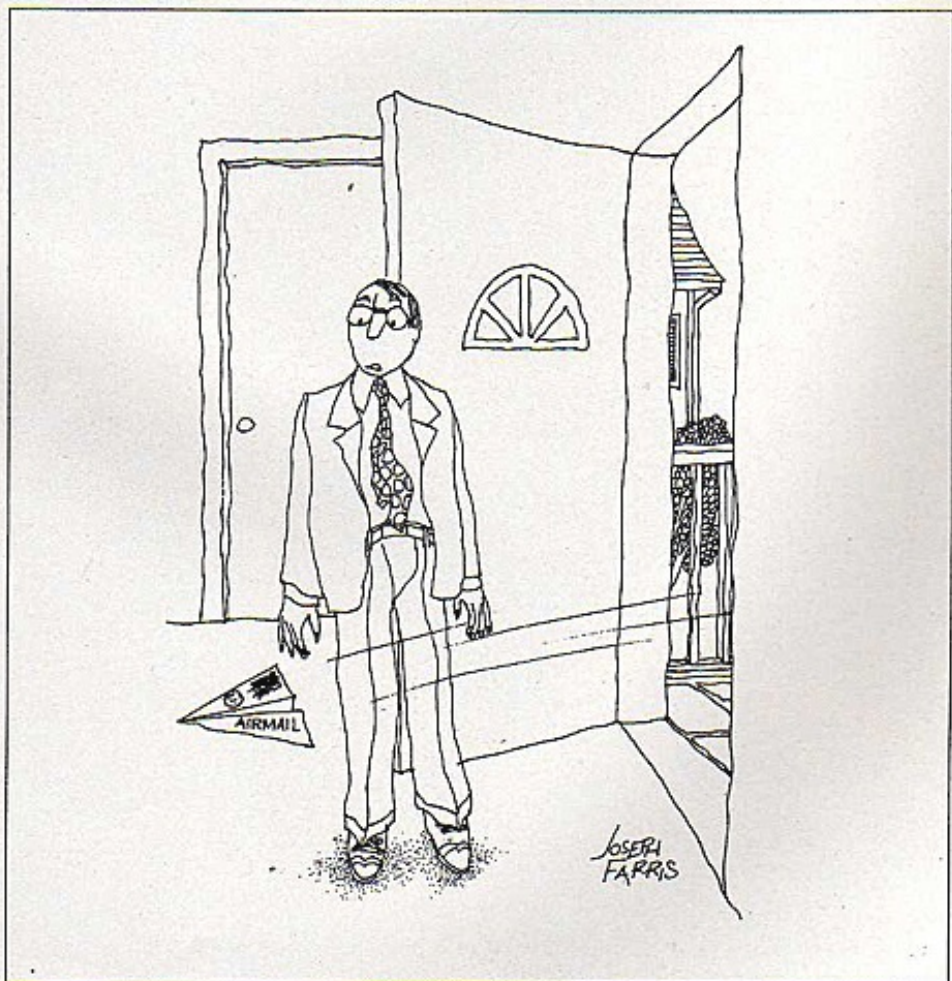
He stopped talking, but the old man still said nothing. Merlin leaned into the sun and put his lips close to the gray ear nearest him.

"I say," he said loudly, "there's no place to go, is there? Where can you go?"

The eyelids twitched slightly. The dry lips parted.

"Get off the Earth," said the old man. "If you can't scratch a living down here, you got to get off the Earth."

Merlin sat back. The advancing sun had found the thin sole of his left shoe again. The heat was burning his foot now, but he could not summon up the will to pull it back into the shade. He sat. 



ADVENTURE OF THE METAL MURDERER

*On a death mission, he
found a friend*

BY FRED SABERHAGEN

It had the shape
of a man, the brain of an elec-
tronic devil.

It and the machines like it
were the best imitations of men
and women that the berserk-

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CHRIS MOORE





ers, murderous machines themselves, were able to devise and build. Still, they could be seen as obvious frauds when closely inspected by any humans.

"Only twenty-nine accounted for?" the supervisor of Defense demanded sharply. Strapped into his combat chair, he was gazing intently through the semitransparent information screen before him, into space. The nearby bulk of Earth was armored in the dun-brown of defensive force fields, the normal colors of land and water and air invisible.

"Only twenty-nine." The answer arrived on the flagship's bridge amid a sharp sputtering of electrical noise. The tortured voice continued, "And it's quite certain now that there were thirty to begin with."

"Then where's the other one?"

There was no reply.

All of Earth's defensive forces were still on full alert, though the attack had been tiny, no more than an attempt at infiltration, and seemed to have been thoroughly repelled. Berserkers, remnants of an ancient interstellar war, were mortal enemies of everything that lived and the greatest danger to humanity that the universe had yet revealed.

A small blur leaped over Earth's dun-brown limb, hurtling along on a course that would bring it within a few hundred kilometers of the supervisor's craft. This was Power Station One, a tamed black hole. In time of peace the power-hungry billions on the planet drew from it half their needed energy. Station One was visible to the eye only as a slight, flowing distortion of the stars beyond.

Another report was coming in. "We are searching space for the missing berserker android, Supervisor."

"You had damned well better be."

"The infiltrating enemy craft had padded containers for thirty androids, as shown by computer analysis of its debris. We must assume that all containers were filled."

Life and death were in the supervisor's tones. "Is there any possibility that the missing unit got past you to the surface?"

"Negative, Supervisor." There was a slight pause. "At least we know it did not reach the surface in our time."

"Our time? What does that mean, babler? How could... ah."

The black hole flashed by. Not really tamed, though that was a reassuring word, and humans applied it frequently. Just harnessed, more or less.

Suppose—and, given the location of the skirmish, the supposition was not unlikely—that berserker android number thirty had been propelled, by some accident of combat, directly at Station One. It could easily have entered the black hole. According to the latest theories, it might conceivably have survived to reemerge intact into the universe, projected out of the hole as its own tangible image in a burst of virtual-particle radiation.

Theory dictated that in such a case the

reemergence must take place before the falling in. The supervisor crisply issued orders. At once his computers on the world below, the Earth Defense Conglomerate, took up the problem, giving it highest priority. What could one berserker android do to Earth? Probably not much. But to the supervisor, and to those who worked for him, defense was a sacred task. The temple of Earth's safety had been horribly profaned.

To produce the first answers took the machines eleven minutes.

"Number thirty did go into the black hole, sir. Neither we nor the enemy could very well have foreseen such a result, but—"

"What is the probability that the android emerged intact?"

"Because of the peculiar angle at which it entered, approximately sixty-nine percent."

"That high!"

"And there is a forty-nine-percent chance that it will reach the surface of the

*He blinked away
some London rain, pulled
out his heavy,
ticking timepiece as if
he were checking
the hour, and stood on the
pavement... like a
man waiting for a friend.*

earth in functional condition, at some point in our past. However, the computers offer reassurance. As the enemy device must have been programmed for some subtle attack upon our present society, it is not likely to be able to do much damage at the time and place where it—"

"Your skull contains a vacuum of a truly intergalactic order. I will tell you and the computers when it has become possible for us to feel even the slightest degree of reassurance. Meanwhile, get me more figures."

The next word from the ground came twenty minutes later.

"There is a ninety-two-percent chance that the landing of the android on the surface, if that occurred, was within one hundred kilometers of fifty-one degrees, eleven minutes north latitude; zero degrees, seven minutes west longitude."

"And the time?"

"Ninety-eight-percent probability of January 1, 1880 Christian Era, plus or minus ten standard years."

A landmass, a great clouded island, was presented to the supervisor on his screen.

"Recommended course of action?"

It took the ED Conglomerate an hour and a half to answer that.

The first two volunteers perished in attempted launchings before the method could be improved enough to offer a reasonable chance of survival. When the third man was ready, he was called in, just before launching, for a last private meeting with the supervisor.

The supervisor looked him up and down, taking in his outlandish dress, strange hairstyle, and all the rest. He did not ask whether the volunteer was ready but began bluntly: "It has now been confirmed that, whether you win or lose back there, you will never be able to return to your own time."

"Yes, sir. I had assumed that would be the case."

"Very well." The supervisor consulted data spread before him. "We are still uncertain as to just how the enemy is armed. Something subtle, doubtless, suitable for a saboteur on the earth of our own time—in addition, of course, to the superhuman physical strength and speed you must expect to face. There are the scrambling or the switching mindbeams to be considered; either could damage any human society. There are the pattern bombs, designed to disable our defense computers by seeding them with random information. There are always possibilities of biological warfare. You have your disguised medical kit? Yes, I see. And of course there is always the chance of something new."

"Yes, sir." The volunteer looked as ready as anyone could. The supervisor went to him, opening his arms for a ritual farewell embrace.

He blinked away some London rain, pulled out his heavy ticking timepiece as if he were checking the hour, and stood on the pavement before the theater as if he were waiting for a friend. The instrument in his hand throbbed with a silent, extra vibration in addition to its ticking, and this special signal had now taken on a character that meant the enemy machine was very near to him. It was probably within a radius of fifty meters.

A poster on the front of the theater read:

THE IMPROVED AUTOMATON CHESS PLAYER
MARVEL OF THE AGE
UNDER NEW MANAGEMENT

"The real problem, sir," proclaimed one top-hatted man nearby, in conversation with another, "is not whether a machine can be made to win at chess, but whether it may possibly be made to play at all."

"No, that is not the real problem, sir," the agent from the future thought. But count yourself fortunate that you can still believe it is.

He bought a ticket and went in, taking a seat. When a sizable audience had gathered, there was a short lecture by a short man in evening dress, who had something predatory about him and also something frightened, despite the glibness and

the rehearsed humor of his talk.

At length the chess player itself appeared. It was a desklike box with a figure seated behind it, the whole assembly wheeled out on stage by assistants. The figure was that of a huge man in Turkish garb. Quite obviously a mannequin or a dummy of some kind, it bobbed slightly with the motion of the rolling desk, to which its chair was fixed. Now the agent could feel the excited vibration of his watch without even putting a hand into his pocket.

The predatory man cracked another joke, displayed a hideous smile, then, from among several chess players in the audience who raised their hands—the agent was not among them—he selected one to challenge the automaton. The challenger ascended to the stage, where the pieces were being set out on a board fastened to the rolling desk, and the doors in the front of the desk were being opened to show that there was nothing but machinery inside.

The agent noted that there were no candles on this desk, as there had been on that of Maelzel's chess player a few decades earlier. Maelzel's automaton had been a clever fraud, of course. Candles had been placed on its box to mask the odor of burning wax from the candle needed by the man who was so cunningly hidden inside amid the dummy gears. The year in which the agent had arrived was still too early, he knew, for electric lights, at least the kind that would be handy for such a hidden human to use. Add the fact that this chess player's opponent was allowed to sit much closer than Maelzel's had ever been, and it became a pretty safe deduction that no human being was concealed inside the box and figure on this stage.

Therefore . . .

The agent might, if he stood up in the audience, get a clear shot at it right now. But should he aim at the figure or the box? And he could not be sure how it was armed. And who would stop it if he tried and failed? Already it had learned enough to survive in nineteenth-century London. Probably it had already killed, to further its designs—"under new management" indeed.

No, now that he had located his enemy, he must plan thoroughly and work patiently. Deep in thought, he left the theater amid the crowd at the conclusion of the performance and started on foot back to the rooms that he had just begun to share on Baker Street. A minor difficulty at his launching into the black hole had cost him some equipment, including most of his counterfeit money. There had not been time as yet for his adopted profession to bring him much income; so he was for the time being in straitened financial circumstances.

He must plan. Suppose, now, that he were to approach the frightened little man in evening dress. By now that one ought to have begun to understand what kind of a tiger he was riding. The agent might approach him in the guise of—

A sudden tap-tapping began in the

agent's watch pocket. It was a signal quite distinct from any previously generated by his fake watch. It meant that the enemy had managed to detect his detector; it was in fact locked onto it and tracking.

Sweat mingled with the drizzle on the agent's face as he began to run. It must have discovered him in the theater, though probably it could not then single him out in the crowd. Avoiding horse-drawn cabs, four-wheelers, and an omnibus, he turned out of Oxford Street to Baker Street and slowed to a fast walk for the short distance remaining. He could not throw away the telltale watch, for he would be unable to track the enemy without it. But neither did he dare retain it on his person.

As the agent burst into the sitting room, his roommate looked up, with his usual, somewhat shallow, smile, from a leisurely job of taking books out of a crate and putting them on shelves.

"I say," the agent began, in mingled relief and urgency, "something rather important has come up, and I find there are two errands I must undertake at once. Might I impose one of them on you?"

The agent's own brisk errand took him no farther than just across the street. There, in the doorway of Camden House, he shrank back, trying to breathe silently. He had not moved when, three minutes later, there approached from the direction of Oxford Street a tall figure that the agent suspected was not human. Its hat was pulled down, and the lower portion of its face was muffled in bandages. Across the street it paused, seemed to consult a pocket watch of its own, then turned to ring the bell. Had the agent been absolutely sure it was his quarry, he would have shot it in the back. But without his watch, he would have to get closer to be absolutely sure.

After a moment's questioning from the landlady, the figure was admitted. The agent waited for two minutes. Then he drew a deep breath, gathered up his courage, and went after it.

The thing standing alone at a window turned to face him as he entered the sitting room, and now he was sure of what it was. The eyes above the bandaged lower face were not the Turk's eyes, but they were not human, either.

The white swathing muffled its gruff voice. "You are the doctor?"

"Ah, it is my fellow lodger that you want." The agent threw a careless glance toward the desk where he had locked up the watch, the desk on which some papers bearing his roommate's name were scattered. "He is out at the moment, as you see, but we can expect him presently. I take it you are a patient."

The thing said, in its wrong voice, "I have been referred to him. It seems the doctor, and I share a certain common background. Therefore the good landlady has let me wait in here. I trust my presence is no inconvenience."

"Not in the least. Pray take a seat, Mr. —?" What name the berserker might have

given, the agent never learned. The bell sounded below, suspending conversation. He heard the servant girl answering the door, and a moment later his roommate's brisk feet on the stairs. The death machine took a small object from its pocket and sidestepped a little to get a clear view past the agent toward the door.

Turning his back upon the enemy, as if with the casual purpose of greeting the man about to enter, the agent casually drew from his own pocket a quite functional briar pipe, which was designed to serve another function, too. Then he turned his head and fired the pipe at the berserker from under his own left armpit.

For a human being he was uncannily fast, and for a berserker the android was meanly slow and clumsy, being designed primarily for imitation, not dueling. Their weapons triggered at the same instant.

Explosions racked and destroyed the enemy, blasts shatteringly powerful but compactly limited in space, self-damping and almost silent.

The agent was hit, too. Staggering, he knew with his last clear thought just what weapon the enemy had carried—the switching mindbeam. Then for a moment he could no longer think at all. He was dimly aware of being down on one knee and of his fellow lodger, who had just entered, standing stunned a step inside the door.

At last the agent could move again, and he shakily pocketed his pipe. The ruined body of the enemy was almost vaporized already. It must have been built to self-destruct when damaged badly, so that humanity might never learn its secrets. Already it was no more than a puddle of heavy mist, warping in slow tendrils out the slightly open window to mingle with the fog.

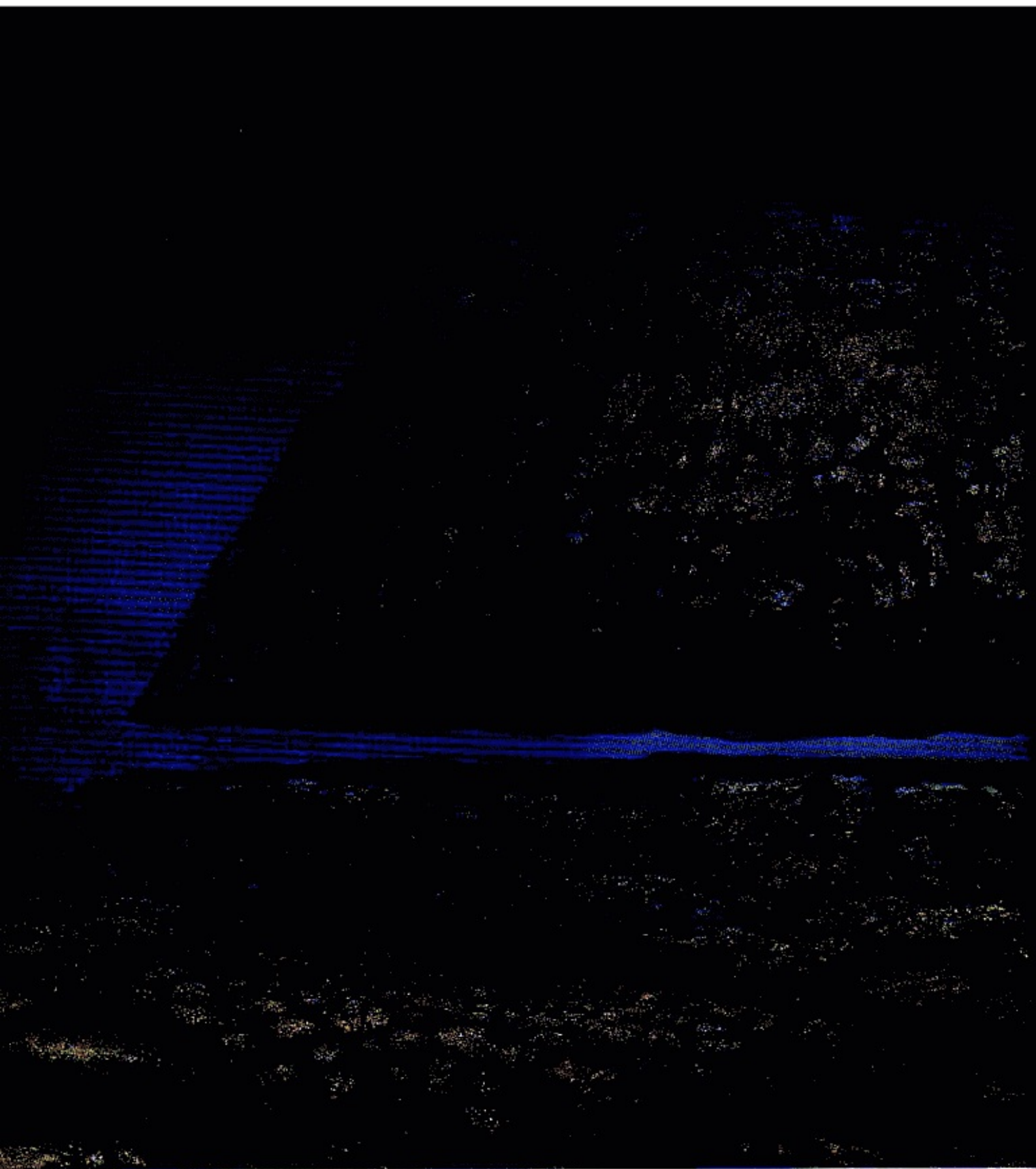
The man still standing near the door had put out a hand to steady himself against the wall. "The jeweler . . . did not have your watch," he muttered dazedly.

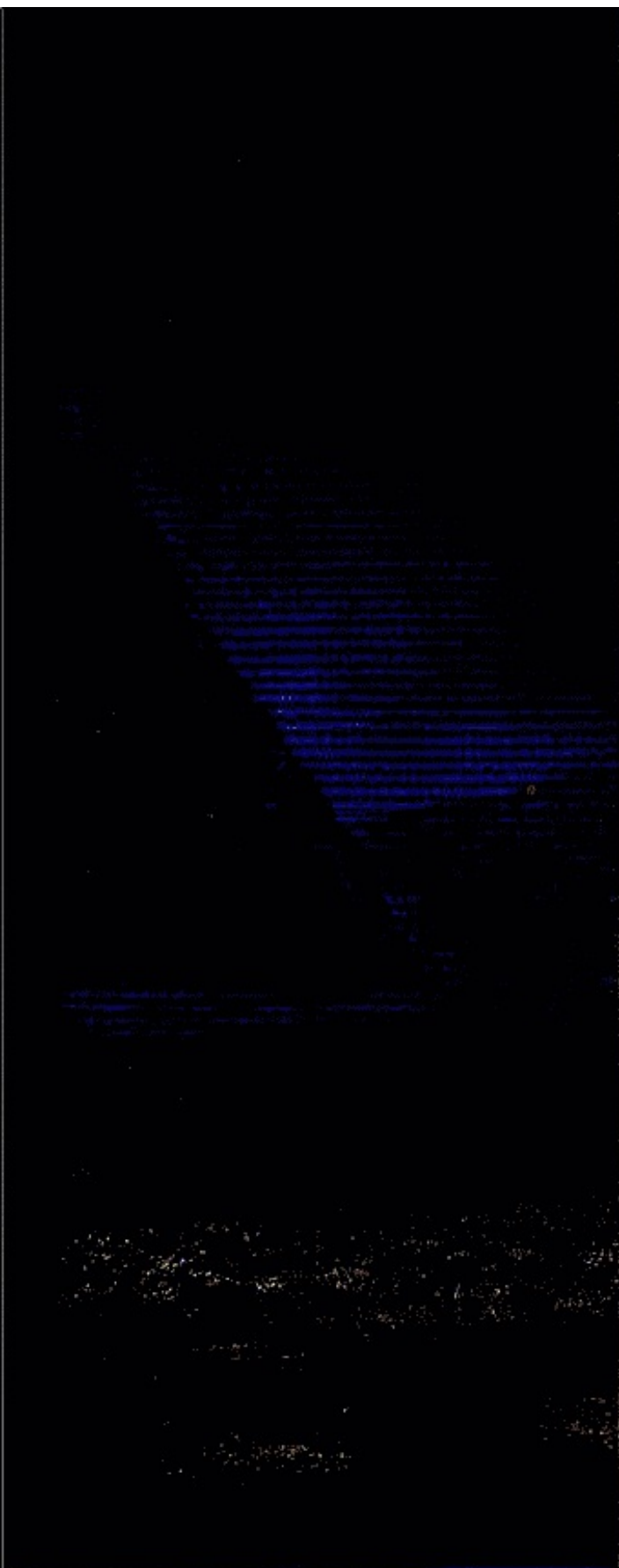
I have won, thought the agent dully. It was a joyless thought because with it came slow realization of the price of his success. Three quarters of his intellect, at least, was gone, the superior pattern of his brain-cell connections scattered. No. Not scattered. The switching mindbeam would have reimposed the pattern of his neurons somewhere farther down its pathway . . . there, behind those gray eyes with their newly penetrating gaze.

"Obviously, sending me out for your watch was a ruse." His roommate's voice was suddenly crisper, more assured than it had been. "Also, I perceive that your desk has just been broken into, by someone who thought it mine." The tone softened somewhat. "Come, man, I bear you no ill will. Your secret, if honorable, shall be safe. But it is plain that you are not what you have represented yourself to be."

The agent got to his feet, pulling at his sandy hair, trying desperately to think. "How—how do you know?"

"Elementary!" the tall man snapped. ∞





THE ROCKS THAT MOVED

*Who would believe that the
rocks not only moved
but had a goal in mind?*

BY JOHN KEEFAUVER

When old Kirby Neson came into town that first time and told everybody who would listen that rocks—boulders—were moving around on their own out in the scrub, nobody, of course, believed a word of it. Everybody knew Kirby was a little funny in the head. But, as it turned out, it wasn't long before the whole town was talking about those moving rocks.

That first day, though, Kirby couldn't even get anybody into his old pickup to take out to where he said—bragging about it—they were moving. He was *proud* of those moving rocks, as if they'd done something he knew they were going to do all along—not that he'd actually seen them move. He was very careful to say that he'd only seen that they *had* moved from one place to another, as if we'd be more apt to believe that. More than once it had happened, he claimed. He said he could tell they'd changed positions because he'd marked some of the rocks with a chalk and then walked off the distance to where he'd driven a stick in the ground. When he checked the rocks a few days afterward, they'd moved. He showed how he'd done it, once he finally got Burt Kolodzie and Fred Knotts out there after they'd got tired of listening to him every time he came into town. Kirby knew that if Burt and Fred said those rocks were moving, everybody, by God, would know they were.

Problem with Burt and Fred,

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DE ES SCHWERTBERGER

though, that first time, was that *they'd* never seen where the rocks had been before, and so there was no way they could really tell if they'd moved. They saw the chalk marks that Kirby had put on them, and they saw how flat everything was all around, like everybody knew would be the case in this part of Texas (there wasn't any hill for the rocks to roll down, that is), and they saw of course how big the rocks were, each of them weighing at least a few hundred pounds. But what they couldn't see were any tracks to show the rocks had moved, which wasn't unusual, though, seeing as how the wind was almost forever blowing out where they were and would have covered up any tracks. Besides that, it had rained the day before, this being the rainy season.

Kirby finally convinced Burt and Fred, though, to do their own marking with the chalk—writing their initials on the rocks—and walking off the distance to the stick he'd put in the ground. He had them dig their own design around the stick so that he couldn't be accused of moving it on them. Then he said he'd bring them on back to the place the next time the rocks changed positions. They did all this and said they'd come back, maybe to humor him, maybe not. Maybe because they were just curious. Because, funny or not, old Kirby could be very convincing when he was talking about his "communing with Nature," as he calls it. And it turned out, so Burt and Fred said, that old Kirby thought the rocks were moving because Nature was fed up with being tampered with by men and their atom bomb and going to the moon and all that, and that she was showing her anger by "flexing her rocky muscles," as he put it, secretly amazed at his own wit.

Of course, in a way, whether the rocks were moving or not was secondary to the fact that the rocks were there in the first place, which was actually the biggest part of Burt's and Fred's being curious—at first, anyway. Ordinarily in this part of the country you didn't see rocks the size of Kirby's. You might see one once in a while, but not a dozen or so grouped together. All you'd see were mesquite and cactus and maybe some scrubby oaks, and some little patches of scrawny grass in January and February when it rained, and with the wind blowing the way it does in these parts, nothing stayed still unless it was tied down, not that the wind could move rocks big as Kirby's, of course.

Anyway, Burt and Fred promised to go back to the place—it was about thirty or so miles out of town, in the middle of nowhere—the next time Kirby told them the rocks had moved. Kirby lived someplace out there; he wouldn't say exactly where his shack was. He didn't want any visitors interfering with his communing with Lady Nature.

Well, in a couple days or so, sure enough, old Kirby came into town and told the two of them that the rocks had moved again, and

out there Burt and Fred went, along with some others, and, as Burt was to say, the rocks he'd marked had sure enough moved—one of them, in fact, about two hundred feet, and it must have weighed close to five hundred pounds. And this time he and Fred could see the tracks the boulders had made because there had been a rain so heavy, before the rocks had moved, that the wind hadn't had time to dry the land enough to blow away the tracks—any tracks. Tire tracks of Kirby's rock-pushing pickup, say. Or tracks of a bunch of practical jokers doing the pushing. Because, you see, there wasn't a rock small enough that Kirby could have pushed by himself, by hand; in fact, as old and scrawny as Kirby was, he could hardly push a marble, not that he wasn't tough. He was about ninety pounds of meanness, getting meaner the older he got. . . . In other words, the only tracks there were those left by rolling rocks. There were about a dozen of them, all weighing into the hundreds of pounds, and

• Old Kirby thought the rocks were moving because Nature was fed up with being tampered with by men and their atom bombs and going to the moon and all that, and that she was showing her anger by flexing her rocky muscles. •

they had all moved.

Well, now, when Burt and Fred got back to town and told it around that rocks were moving on their own out there, it got a different reaction from old Kirby's telling it, you can bet. Besides looking respectable, both of them were, and they weren't a couple of kids, either. People believed them, and most everybody wanted to see for themselves, but by then it was too late in the day for rock watching.

That evening Kirby came on into town, proud as a scrubby peacock, but when he heard how most everybody was planning to go out and see his moving rocks in the morning, he got mad. "Leave them rocks alone!" he said, and kept saying. "Somebody's gonna get hurt out there if you don't!"

Some, making light of it, asked him if he thought the rocks would jump on them. He got madder at that. "If you don't want nobody there, why'd you tell us about it?" Sue Weibacher asked him. (She's been the postmistress ever since her husband died three years ago of gout.)

"Because I didn't know then what I know now!" Kirby said, getting even madder.

"What's that?"

But Kirby wasn't saying. He jumped into his battered pickup and bounced out of town in the direction of the rocks.

It wasn't long before Ed Furrow, who runs a weekly paper over in Gilroy, came nosing around, asking Burt and Fred a lot of questions and trying to find Kirby in town. Kirby wasn't to be found, though. So Ed and Burt and Fred and a bunch of others, including me, went on out to the moving-rocks place. Ed took some pictures, but it was plain that he, not knowing Fred and Burt the way we did and being of a suspicious nature anyway, didn't believe that the rocks had moved by themselves. He wanted to talk to Kirby, but Kirby wasn't to be seen there, either, and, of course, like I say, nobody knew where his shack was.

So the next issue of Ed's paper had a front-page picture story about "Moving Rocks Puzzle Progresso," which is the name of our town, not that there's any progress going on, in my opinion. All of it was written up in a tongue-in-cheek way, and that was how it was treated, too, a day or so later in the Houston paper, which had sent a reporter and photographer to the place after they read the story in Ed's paper, I guess. That, in turn, led to a geologist driving out from the space center there in a few days, and it was raining to beat hell. This was all happening just after we'd started bringing rocks back from Mars, and so there were some geologists at the center.

The geologist didn't believe it, either, as you might imagine—at first, anyway. But he did decide to do his own tests. He made his own markings on the rocks—chipped the boulders—and measured their distance from each other and then took some pictures of them to set their location, too. He estimated their weights with some measuring gadget he had and then said they were all too heavy to be moved by human hand unless you used some big mechanical mover, which would give itself away by tearing up the land.

About a week passed before he came back, and maybe we wouldn't have known it if he hadn't stopped in town en route from Houston and asked Fred to show him the place. He didn't think he could find it himself. When he and Fred and some others got there, including me, you could tell right away that the rocks had moved even if there weren't any tracks to see—some of them hundreds of feet. And somebody, most likely Kirby, everybody thought, had tried to cover up the chipped-out markings the geologist had made by slapping some cement on the scars. Kirby still wasn't to be seen, though. Nobody had seen him, in fact, since the day he'd shown Burt and Fred the rocks, which wasn't unusual, considering his ornery ways.

Well, this geologist measured the distance the rocks had moved and looked at a book and some charts and did some calculations and used more gadgets. When he had finished, he told us that the wind was

moving the rocks. "Winds funnel through here pretty strong," he said after saying that the rocks were actually in a dry lake bed so shallow you'd never know it. We had realized, though, that the soil was sandier and harder here than most soil in the area. "When the surface gets wet from rain, the ground gets extremely slick, and when conditions are just right, movement occurs," he said.

Well, some believed him and some didn't, and, as you'd expect, among those who didn't was Kirby.

Just as everybody was getting into cars and trucks to go back to town, Kirby came gunning up in his beat-up pickup. He jumped out of it before it had hardly stopped and started yelling and cussing and screaming soon as he saw the blue NASA sign on the side of the geologist's brand-new white truck.

"Get the goddamn hell out of here!" he yelled at the man from Houston. "You bastards can tear up the moon and Mars and bring Nature's rocks back here where they ain't supposed to be, but you leave these earth rocks alone!"

"But, sir," the geologist said, turning nearly as white as his truck, "we haven't bothered these rocks. We haven't moved them an inch. Wind and rain have done it."

"Wind and rain!" old Kirby roared. "Wind and rain! Nature is doing it!" He was pointing into the sky. "Nature! God!"

I believe if Kirby had had a gun, he would have shot the man right there. As it was, he suddenly ran toward his truck, and everybody got out of there fast. When we looked back, he sure enough had his old rifle in his hand.

Fred and I and some others made trips out to the area in the coming days, regardless of Kirby; we didn't think the old buzzard would shoot us. We never saw him, as it turned out. But we did see that the rocks moved most every time it rained (we were still in the rainy season) as long as the wind was blowing hard, just like the geologist had said.

And they always moved in the same direction the wind was blowing. Still it was hard for us to believe that wind and rain were moving those god-awful big rocks. But, unlike Kirby, we never thought God was doing it.

We began to wonder, though, as time passed. First of all, we went out there once and saw that the rocks had moved a lot more than they ever had before. Although there was a wind, it wasn't a particularly strong wind. It had rained just before, though. This happened more than once. More and more we'd go out there and discover that the boulders had moved one helluva distance with hardly any wind. Finally, one time one of them moved about a quarter of a mile and there'd been no rain for at least a week and the wind hadn't amounted to a damn thing. And this was the biggest rock—a monster, big enough to knock down a house. You knew that rock really had to be moving to cover all that

distance in such a short time, and I say short time because it just so happened that I saw the movement the boulders had made on consecutive days because I happened to be passing by the place both days, and I'd driven off the road to the site both times.

Also, it seemed that the rocks—all of them—were getting bigger. Of course, I thought this was my eyes or imagination. But when I got Burt and Fred to go out there with me in a few days, they thought the same thing, but, like me, they couldn't believe it.

Another thing: There were more rocks moving now. We were positive of that because one of the first things we'd done was to count the rocks that were moving. There were fourteen of them to begin with. Now there were twenty-three. The extra ones had just appeared out of nowhere, it looked like.

Then the strangest thing of all happened. We went out there one day after it'd been

*• We were just barely gaining
on them—hundreds
of boulders, maybe thousands,
with more coming
from either side all the time,
all monsters, all
heading in the same direction...
straight toward Progreso! •*

dry for a long time—we were getting into March now. The rocks—there were now thirty-seven—had all moved at least three quarters of a mile; we were sure of that because there had been—and was—such a small amount of wind that the tracks weren't blown over by sand, especially those made by the big rocks, and they were all big now. The tracks were so deep that there didn't have to be any rain-softened ground to show them up. Big, deep grooves!

But what I'm getting at is this: All the rocks had changed direction. They were now going in just about the opposite way they had been for months—against the wind now.

When we phoned the geologist at the space center, he said he'd meet us at the site the following day.

When we went out there the next day to meet the man, the rocks were gone. Not a single one anywhere. They hadn't been gone long, though, because we could still see their tracks leading off in the dry soil, and there was a very stiff wind that day. The rocks were heading right into it.

We got in Burt's four-wheel-drive and started after them. We figured the boulders had gone maybe just out of our sight, and that the man from Houston would find us and the rocks easily enough by following the tracks.

Well, we drove and drove without seeing any rocks, and Burt started giving the truck more gas until we were going along at a good clip, just about being bounced to the roof because, of course, we weren't following any road. It was all desolation for miles and miles, all the way into Progreso and beyond. A good ten or fifteen minutes passed, and we still didn't see the boulders. We saw more rock tracks, though. A lot more. New ones came in from either side. Then we began to hear a strange sound at about the same time we saw what appeared to be a cloud of dust ahead. As the size of the cloud grew, the sound began getting louder—a rumbling, a crashing. The ground began to shake.

In less than a minute we saw them, or at least the tail end of them. After Burt gave the truck even more gas, we could see more of the dozens of boulders making up the rear end of the rolling mass, and although we were now traveling at about forty miles an hour, we were just barely gaining on them—hundreds of boulders, maybe thousands, with more coming from either side all the time, all monsters, all heading in the same direction, as the crow flies, straight toward Progreso!

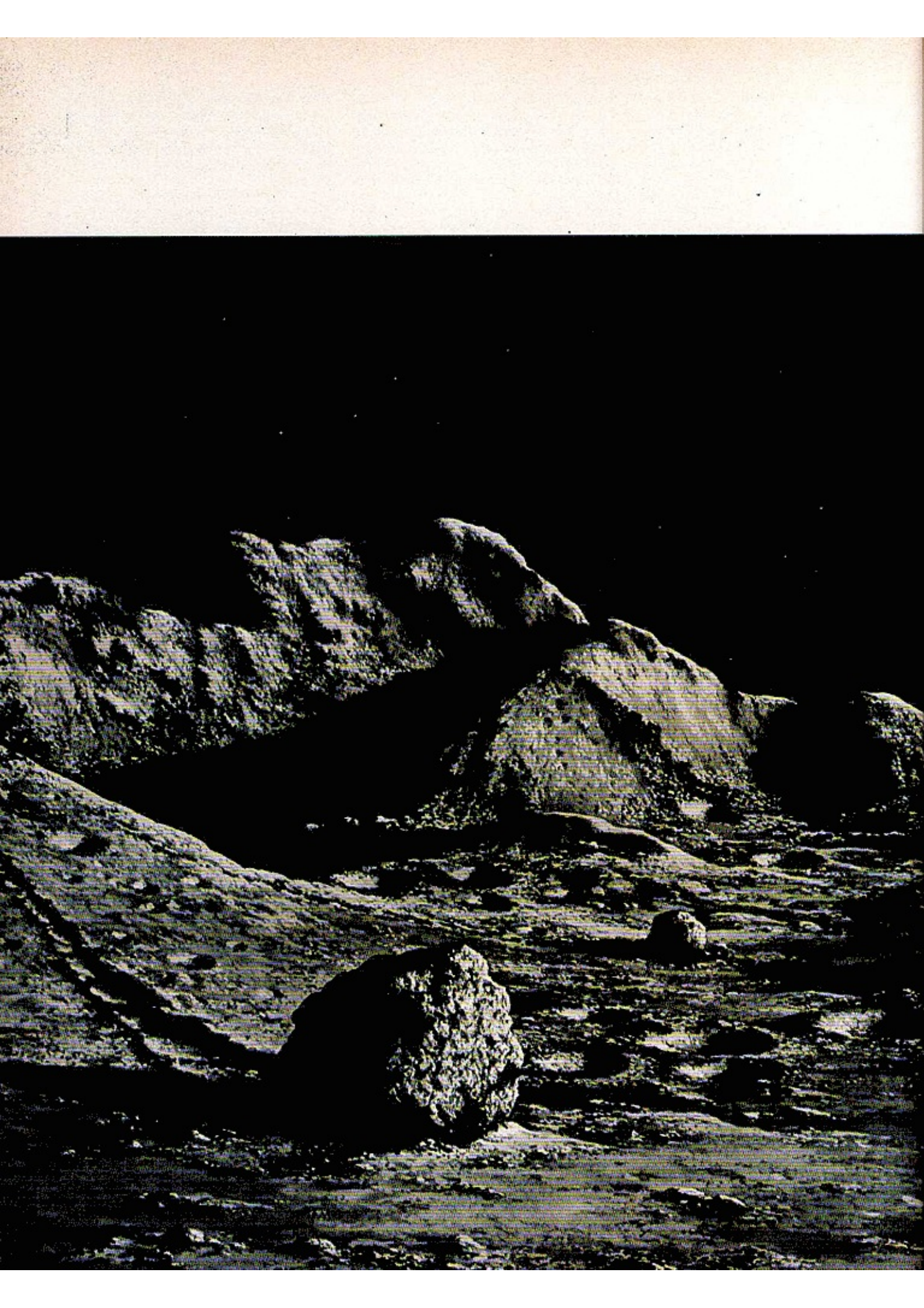
Burt, who was driving, must have thought the same thing I did at the same time, because as I yelled, "Let's get on the road!" he had already started to whip the pickup to the left toward the road into Progreso, the idea being that we might reach town before the boulders did and give a warning. But even before we were halfway to the road, we could see that the rocks were over the highway and beyond as far as we could see.

And then a horrible thought made me look to the far left and then behind us, and I saw hundreds more of the huge monsters bearing down on us, huge, aiming right for us. Pointing at them, I screamed for Burt to turn right and speed up.

He did. But now the rocks ahead of us were rolling faster, leaving us, while the ones behind were gaining. In minutes we would be crushed flatter than a couple of cockroaches.

Then, as if on command, the direction of the boulders changed, both those in front of us and those behind. They began to split—some to the right, some to the left. And I realized what was happening. They were going around Progreso, and in the process, as far as I could guess, they would miss us. The town was saved because the rocks had a different purpose in mind.

On the far side of Progreso, though, they converged (we would learn), and without ever changing direction again they headed directly, ever faster and growing more monstrous at every mile, toward the space center in Houston. ∞





*It was an innocent
little "outing"—on the
bare lunar surface*

THE VACUUM- PACKED PICNIC

BY RICK GAUGER

As she approached my table across the pilots' crowded ready room with her teacup in her hand, I felt an urge coming over me. I had an urge to bite her—on the smooth, ivory neck, which emerged from the heavy aluminum collar ring of her close-fitting pilot's vacuum suit. Maybe it was the way she jangled all those pockets, tubes, clipboards, and electronic terminals as she made her way through the mob toward me. The typical space pilot's swagger—but female. Maybe it was the merry brown eyes and the humorous twist of her lips as she sat down in front of me.

"You're Captain Suarez, aren't you?"

"Yeah. My friends call me—"

"Pancho. Right?"

"Right. I hope you're one of my friends," I said, my figurative tail wagging furiously. Worst case of vibes I'd ever had. It seemed to be mutual. She studied me amusedly while her tea cooled.

I said, "Surely we've never met before. I know I'm pretty absent-minded, but . . ."

"Your friend Arunis Pittman told me about you. I met him on the polar sky station. He thought I should look you up

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LUDEK PESEK

when I got to West Limb. He said you would probably offer to keep me amused. You were highly recommended."

"Old Arunis! Damn! How is he?"

"He's fine. He said I should ask you whether you're still keeping the CO₂ high in your spacecraft life-support system, instead of doing the regulation aerobic exercises, the way you're supposed to."

"Damn again! How could he know about that? I'll bet he's trying to warn me that the agency is monitoring my life-support system again. I appreciate that. Thanks, Captain . . . er . . ."

"Cramblitt. I prefer Stacy, however." After a pause she asked, "Well, are you?"

"Not anymore. I don't want to be grounded again. I'll do my exercises like a good boy—"

"I don't mean that," she said. "I mean, are you going to amuse me? This is the first time I've been on the moon. I don't have anything to do until the passenger shuttle begins its preflight countdown tomorrow night."

An opening big enough to drive a truck into. I had to think of something, immediately, that would capture her imagination. She tucked an errant strand of glossy black hair into her chignon as my mind raced.

"A picnic. How would you like to go on a picnic? With me," I said, blurring out the first idiom that came into my mind. "If you like, I'll take you to one of my favorite spots. It's not far, just a short walk from the base."

Her reaction was everything I could have hoped for. Her delicate mouth dropped open a little. "You're kidding. An outdoor picnic?"

"Why, sure," I lied. "It's a new recreation we have come up with here on the moon. Gets us away from the madding crowd. A great view, the hills, some nice rock colors. Perfect time of the month for it, too." Bridges were flaming behind me. *Why do I do these things?* "Of course you'd probably rather not go to the trouble. You're probably too tired, right?"

Her excitement showed on her face. Her eyes began to twinkle. "Oh, no! I wouldn't miss this for anything!" she exclaimed. "A picnic on the moon! That's fantastic! Arunis was right about you, Pancho."

"Aw," I mumbled, standing up and giving her my boyish grin. "Just leave it all to me. Meet me at Hatch Seven-Charlie—anyone can tell you where it is—at ten hours tomorrow. Put on your vacuum suit and bring a fully charged backpack. I'll take care of the rest. I have to make a hopper run now. See you then."

Her smile followed me across the ready room as I made my way to the hopper dock. I waved goodbye before turning into the corridor. Male residents of the base who happened to be in the ready room watched all this enviously. They didn't see the grimace that appeared on my face as soon as I was out of sight. I had really jumped into it with both feet this time.

Well, the business I had handed her

about a picnic wasn't one-hundred-percent baloney. No one had ever really been on a picnic on the moon before, but the West Limb intellectual elite (my pals and I) had been discussing the idea for quite a while. We regarded our project as a noble pioneering effort, an expansion of man's capability in the space environment, but, mainly, as a way to get some privacy with our female colleagues. The base at West Limb hadn't yet become the luxurious suburb that it is today. In those days it was more like a big locker room on the moon, a crowded, noisy set of tunnels and domes, which reeked of old socks and new paint. We all lived in this warren like so many rats in a hole. The transients among us, from months of isolation, were nearly barbarians, while the permanent residents were antagonistic from never being able to get away from one another. Life on the old high frontier was rough, yes, sir!

Unfortunately, plans for outings à deux hadn't gotten past the speculative stage yet. One of my friends had analyzed the problem of picnic-site selection. Using lots of stolen computer time, he had determined which areas on the lunar surface around West Limb could be inhabited by a man—and a woman—for a reasonable length of time in a standard vacuum-survival tent. Of course, the idea was to obtain a comfortable shirt-sleeves-or-less habitat.

You know what survival tents are. They're what's inside those emergency boxes you see everywhere on the moon. Buggies have to carry one per passenger; so do the rocket hoppers. You've undoubtedly got several small ones under the bed in your hotel room. Solo prospectors and other outdoor workers use them regularly when they can't get to any other pressurized shelter. They climb into a tent, seal the opening, and inflate it with their reserve air. The tents blow up into a transparent plastic dome. Once the dome is pressurized, you can take off your vacuum suit and relax a bit. The old-timers say they're for leaks, whether you get one or have to take one. That's a joke.

Anyway, the most important element of my friend's analysis was the temperature inside the tent. Sunshine was everything. Anyone exposing his ass to the direct rays coming through the plastic would be rapidly rump-roasted. Complete lunar nighttime would be a glacial and gloomy experience, to say the least. No, what we wanted was a cheerful, sunshiny, picnic sort of experience, with lots of scenery, close to, but not in sight of, the base or any of the main trails. A flat, shady spot on a slope facing a sunlit landscape, with an illuminated boulder nearby to reflect warmth toward the picnickers, would be ideal.

The computer in my friend's office, properly (and illegally) stroked, coughed up a number of map overlays, one for each standard day in the lunar month, showing where such sites might be looked for in the

area around West Limb. It was a brilliant piece of applied astronomy.

That afternoon my rocket hopper was scheduled to haul a load of hung-over engineers back to Polar Solar from their monthly spree at Grimaldi, and we had to make a lot of local trips, too. I let my copilot do all the flying while I studied one of those maps. Each time we boosted out of the West Limb hopper pad, I compared the map with the territory (or is it lunitory?) round about. By quitting time, I had selected a promising rock field a short distance north of the base. It all seemed so safe and easy.

That night I cashed in on the accumulated favors that people on the base owed me. I got the next day off and a free recharge of my vacuum-suit backpack, and I borrowed two one-man vacuum-survival tents. I arranged for an airtight case packed with cold chicken, potato salad, cole slaw, some vegetables, a fresh loaf of French bread with real butter, lemonade, and two bottles of Boordy Vineyards' *vin gris*. West Limb may have been a real sty in those days, but the pigs ate and drank well.

The cafeteria manager had heard rumors. He drew me into a corner of the kitchen, looked around carefully, and leered at me.

"Suarez," he said confidentially, "what are you up to? I mean, really?"

"Porkner," I said, "a gentleman, who is entrusted—"

"No, I mean, really. No kidding. Is it—"

"You got it. It's a technical operation. Something new," I said, leering back at him.

I made my escape while he was oh-ho-ho-ing at me. It doesn't do to antagonize the cafeteria manager, or to tell him anything, either. I went to bed early that evening. Lucky for me, it was my turn in the shower.

Stacy Cramblitt was waiting for me at the hatch when I got there at ten hours. All the running around and plotting I had done had seemed a little sordid to me, I guess. But the way she looked, standing there, cool and amused, in her tailor-made, fluorescent-pink pilot's vacuum suit, made my conscience clear up right away.

"Everything set?" she asked.

"Not quite yet," I said, putting my load of survival tents, blankets, and the food case into the airlock. For once there wasn't anyone in the corridor near the hatch. I held her by the arms and drew her close to me.

"I'm setting your suit radio on my private channel," I said. She looked at my face as I clicked the knob on her chest module. A delicate perfume rose from her collar ring.

"You have nice eyes," she said. "Now you're blushing."

"Nonsense. After you."

We stepped into the airlock and went through the rest of the suit-checkout procedure. I locked us through to the outside. The sun was glaring in the west. The structures scattered on the surface extended inky shadows across the rutted, pockmarked ground. As we walked, Sta-

cy's helmet swiveled. She was taking in the torn-up ground, the glinting litter of aluminum scraps and shards, the awkward tangle of antenna towers and guy wires, and the humped and ugly buildings.

"It's not very pretty," I said.

"The human race takes its mess with it everywhere it goes," she said.

"Better here than on the earth," I said. "Besides, it's not all like this. This is a little zit on the face of a whole world. We're just a short walk from the real moon, where no one has ever set foot. Give it a chance." I took hold of one of her gloved hands.

"Okay," she said, looking at me. I couldn't see her face through her mirrored sun visor, but I felt her squeeze my hand.

We must have been an odd sight as we hiked out of view over the first ridge north of the base. There were undoubtedly a hundred people peeking at us from the windows of the base buildings. I was lugging the rolled-up tents and the food case. Stacy had a blanket over each shoulder. One of the blankets was a garish plaid; the other was white with green and orange stripes and the words *FUERZAS ARMADAS DE MEXICO* printed on it.

An hour later we were crossing the vast, boulder-strewn slopes of Hevelius Crater, overlooking the flat Oceanus to our right. I noted that our feet were in the shade, but the tallest boulders reflected a lot of sunlight onto the ground. We could see well enough to pick our way along, and my blackbody thermometer registered in the middle teens. The map supplied by my computer-pushing pal was proving remarkably reliable.

"You know, it's not just all gray, black, and white," Stacy said. "I can see all kinds of subtle colors. Look at that greenish streak in the rocks over there. See it?"

"I sure do. You've really got good eyes. Most people can't see these things until they've been on the moon for a year or more. Most don't care. There's a lot of beauty here. It just doesn't smack you in the eye the way it does back on Earth. God didn't make this scenery for clods. You have to have some talent and sensitivity." I was laying it on a bit thick, but it wasn't all crap.

Stacy was having a good time in the low gravity, bouncing around me as I went striding along. She kicked up a big cloud of dust in front of us.

"Look at that," she said. "That dust settled so quickly that I could almost hear the thump it made on the ground. I've logged a lot of hours in space, but this is the first time I've ever been on my feet like this on another world. Do you ever get used to the strangeness?"

"Not really," I answered. "I never really get completely used to it. I'm always finding new things to look at." I stopped suddenly and stooped to look at the ground. "Look here."

As she bent over, I pointed out a circular pattern in the dust. In the center of the circle was a tiny grain of shiny glass. Hair-

like lines radiated from the center of the pattern. The lines looked as if someone had drawn them in the dust with a fine needle. The entire formation was about the size of a dime. There were also concentric arcs in the pattern I had discovered.

"What is it?" Stacy asked.

"I call them dust flowers," I said. "Don't touch it; it'll fall apart if you do. A friend of mine thinks they're micrometeorite craters. Where the glass is in the middle is where the micrometeorite struck, and the pattern around it was formed by shock waves traveling in the dust. My friend says they can form only on this kind of fine-dust surface. He's writing a paper about it."

"What do you think they are?"

"I think they're dust flowers. We'll probably find more of them if we look around carefully."

"Let's keep our eyes open."

We started off again, passing among shattered heaps of rocks and skirting around the lesser craters.

Stacy said, "You know, it seems odd to me that there should be so much fine dust on the ground around here. I thought the lunar soil wasn't supposed to be differentiated—no wind or water to sort it out into particles of varying sizes, and so forth."

"That's right," I said. "Somebody's not following the rules."

We marched along in silence. I kept looking for an open spot to pitch the tents in.

After a while Stacy and I emerged, so to speak, from a forest of boulders into a clearing. The scene was extraordinary, really. It was like a natural Stonehenge, with a circle of rough columns surrounding a sort of terrace in the hillside. The circle was open to the east, and we could see far out over the flatlands. A nearly full Earth hung low over the razor horizon. I almost expected to see a sail on that dappled, oceanlike expanse and surf rolling in on the beach several kilometers below us.

Stacy was superimpressed. She just stood there and said, "Glorious. Glorious. It really is." She turned to me. "No one else has ever been here, have they?"

"Don't see any footprints, do you? I've been saving it for someone special." *Someday God is going to punish me, I thought.*

"Let's get out of these suits and have some lunch," I said. "I'm starving."

I untied the roll of survival tents and laid them out on the ground, arranging them so that their door openings faced each other. The openings in tents of the kind I had are round, surrounded by a complicated, flexible gasket. You can seal up a single tent with its own door, or double up two tents by pressing their door gaskets together. The gaskets are supposed to interlock tightly when the tents are filled with air.

I held up the entrance of one of the tents to allow Stacy to crawl in, dragging the food case and the blankets. Then I crawled into



it. Crouching on my knees, I carefully sealed the two tents together.

"That looks airtight," I said. "Let's see what happens when I let the air out of one of these reserve bottles. If it doesn't hold, we'll have to call it off and go back to the base."

"That would be miserable," Stacy said, poking me playfully in the backside.

I opened the valve on the air bottle. The tents stirred like living things, then ballooned into a pair of dome shapes.

"It's like being inside a waterbed mattress," Stacy remarked.

"Or two jellyfish kissing," I answered, watching the other tent through the transparent plastic walls of our tent.

Stacy began to spread the blankets on the tent floor. "Why did we bring two tents?" she asked.

"For storage. When we take our suits off, it'll be like having two extra people in here."

"So long as they don't want any lunch. Did you notice what's happening to the blankets?" she asked, holding up a ripped-off handful. "Looks like vacuum and sunlight aren't good for wool."

"They were getting pretty worn out anyway."

"How's the inflation going?" she said.

"Looks okay so far," I answered. The two tents, joined at their doorways, had become rigid. The air temperature had leveled off at twenty-five degrees centigrade, and the air pressure was holding steady at an alpine two hundred thirteen millibars.

"Can we take off our suits now?"

"Let me go first," I said. Cautiously I rotated the locking ring on my suit collar. Nothing happened. So I removed my helmet. The air in the tent felt fine. On my cheeks I could feel the cheery warmth of the nearest boulders.

"It's great," I said, disconnecting my backpack hoses. Soon we were both shucking ourselves out of our vacuum suits.

In her long johns, Stacy looked like a tax-free million. She removed her inner gloves and socks and sat, twiddling her toes at me and smiling. I gathered up our suits, helmets, and boots and passed them through the now-rigid doorway into the other tent. That made enough room in our tent for us to spread out the blankets. I kept my backpack with us and shoved Stacy's through the doorway into the other tent with the rest of our gear.

"All righty," I said, unlatching the food container, "luncheon is served at noon, under the stars. We have chicken, cold, and French bread, hot. We have slaw, tomatoes, and chilis. Have a glass of this good rosé, my dear Captain Cramblitt." I poured some wine into our glasses. Then I dished up big platefuls of everything. We lay down together on the blankets, resting our backs on my backpack.

"Pancho, this is delicious," Stacy mumbled through a mouthful of Porkner's warm bread.

"Yep. My compliments to Cookie, and

I'm so glad he's not here now," I joked.

After two hours I was feeling pleasantly tight around the middle. Stacy was pouring refills for us from our second bottle. The atmosphere in the tent was tropical. The brilliant earth, blazing cobalt, turquoise, and white, shone down on us. We lay, hips touching, Stacy's head on my shoulder.

I raised my glass to the home planet. "Here's to everybody who happens to be looking at us right now. Here's looking at them." My speech was only a little slurred.

"They can't see us," Stacy whispered, finishing her wine. "We're in the new-moon phase right now."

I turned to her and said, "Well, here's looking at you, anyway," and, what the hell, I kissed her on the mouth. She kissed me back, clutching at my neck.

Well, I never kiss and tell, but I will say that Stacy and I peeled each other out of our remaining clothing. I threw the food box and our long johns into the other tent with the other stuff. Infrared from the ground and the surrounding boulders shone on our naked bodies, but it was nothing compared to the glow that was in the tent already. Her breasts flushing dark rose, Stacy spread herself on the blankets and held her arms out to me.

Now you're not going to believe this, but I hesitated at this point. I was, after all, an old space hand, and the open doorway leading to the other tent had been troubling me. There was no reason to worry about it, but open hatches of any kind hover in my mind's eye until I get up and close them. Most of us out here are like that.

"Don't go away," I said, rising to my knees. I found the tent's door, a flat disk of flexible, transparent plastic, rolled up in a corner. I unrolled it and pressed its gasket into place around the circumference of the doorway between the two tents.

"Now I can give you the attention you deserve," I said, and I embraced her. Stacy snuggled in my arms and gave me a kiss. I really was enjoying every moment of this.

While Stacy was tickling the lobes of my ears, we were interrupted by a strange noise. It sounded like a sudden release of steam. The total silence of the lunar mountainside had seeped into our unconscious during the afternoon, and this uncanny sound made us leap off the floor. There was one second of panicky thrashing as we disentangled our arms and legs. I crouched like a cornered alley cat, glaring around at the motionless landscape outside the tent. I didn't see anything. Then I noticed Stacy was staring goggle-eyed at the entrance of our tent.

"Holy Mother of God," I moaned. The other tent, the one with our stuff in it, had become detached from the tent we were in. The two door gaskets had separated, the air had escaped, and now the other tent was lying collapsed over our suits, our helmets, our boots, our underwear, the food container, Stacy's backpack, the dirty dishes. All of it was out there in the clean, fresh vacuum I had been talking about. We

were left buck-naked in the tent, with nothing but the blankets and my backpack.

Stacy gulped for several seconds. "Well," she finally said in a small voice, "now we won't have to wash the dishes."

There was only one reason we weren't already dead of explosive decompression: I had sealed the door of our tent after getting rid of the last of our clothes. I could see my vacuum suit and helmet less than a meter away through the transparent plastic of the tent. I studied Stacy's backpack. A little red tag was sticking out of the air-regulator compartment. For some reason, the safety on her air bottle had blown, allowing the bottle to vent freely in the sealed tent. The excess pressure had blown the door gaskets of the two tents apart. The storage tent lost its pressure suddenly; if it hadn't had all our equipment in it, it probably would have flown away like a released balloon. Our own tent was holding air just fine, although the plastic door was bulging outward unnervingly.

I dragged my backpack toward me and looked at the readouts. Four hours, at the most, of reserve air and CO₂ absorption. The arm's length of vacuum that separated us from the radios in our helmets might as well have been millions of kilometers. Our ass was really in a sling, and my face must've shown it as I looked up from the backpack.

Stacy covered my hand with hers. As calm and beautiful as an angel, she said to me, "Don't be afraid, Pancho."

Guilt replaced terror in my wretched soul. "N-no," I said. "We're not dead yet, eh, Stacy."

"Although we might as well disregard the chances of anybody finding us out here by accident," she said firmly.

Oh, yes. And my own stupid fault, too.

"Well, I shouldn't have pressured you into bringing me out here," she said.

"Don't say that, Stacy. I always think I know what I'm doing." *Don't I ever!* By this time she was holding me, stroking me. There I was, lower than a crater's bottom, and she was trying to comfort me.

The sky over our heads was black. The stars were waiting to see what I could come up with. "Whatever we do, we'll have to do it soon," I quavered. "Any suggestions?"

"Only two. The first one is, we say the hell with it, hope for rescue, and have a good, but short, time."

"I'm not up to it."

"Forget it. The other idea is to open the entrance of our tent and try to grab one of the helmets before the decompression kills us."

"Now I'm really not up to it."

"Nothing to it. You get the helmet and reseal the door. I let out all the air from your backpack reserve bottle to repressurize our tent. One, two, three. Then we radio for help."

"I could never reclose the door gasket fast enough."

"We could wrap ourselves in strips of blanket, mummy-style, really tight, to pre-

vent embolism."

"Darling, it sounds like a brave way to commit suicide. If we can't think of anything else, we'll try it, all right?"

"Okay," she said, crestfallen.

"Besides, the blankets are falling apart," I said, holding one up. The blankets had become so dried out and flimsy that they were turning to shreds as we moved around in the tent.

There was a long silence. We sat huddled, arms around each other, like a pair of monkeys in a thunderstorm. Stacy had been doing her best to encourage me. Her proposal, to chance letting the air out of our tent, was a long shot, but it was basically practical. Definitely worth a try. But I couldn't face it right away. She was a better man than I was.

Stacy started to droop a little. I hugged her more tightly, and she straightened up again. Damn it! I visualized the path we had walked from West Limb. Just a short walk, if we didn't stop for sightseeing and fooling around. Between the rocks, the ground was smoother than usual for the moon, like a beach made of fine ash instead of sand. We could do it barefooted. I was beginning to have a thought.

"Stacy—"

She responded with a loud sniff. Then she said, "I'm sorry. I thought I was being brave. It's just such a damn rotten break—"

"I should be shot for getting you into this," I said. "When we get back to the base, you should turn me in for disciplinary action."

"I d-definitely will. Corrupting my morals—" By this time tears were running down my face, too.

"Listen, Stacy, there's another thing we can do. We can try to walk back to the base. We could stand the tent on its edge and roll it along from the inside. We'll just leave all our stuff here. There's enough air in my backpack for us to make it if we start now."

She thought about it for a moment. "Why not?" she said, finally. "Even if the tent rips and we depressurize, we won't be any worse off than we are now, will we?"

"Nope."

"Let's do it," she said, jumping up and pulling me to my feet.

I lifted up my backpack and hung it on my back, tucking the dangling air and coolant hoses under one of the shoulder straps. Stacy helped me adjust the harness to fit my naked torso.

Stooping, we both pushed against the wall on one side of the tent, trying to tip it over. The plastic felt icy cold against my hands.

"Try to shuffle your feet toward the edge of the floor," I said. The tent slowly rolled onto its side, the scraps of blanket sliding downward as the tent floor tilted upward. The rim of the tent flattened on the ground. It was like standing inside a huge flat tire. The floor of the tent was now a wall to my right. Since it was no longer resting on the ground, it was bulging outward almost as

much as the dome roof on my left side. The floor was made of the same kind of transparent plastic as the dome was. I tapped on it to knock off the dust that stuck to its outside surface. Very little dust actually fell off, but at least we could see through the material.

"Okay," I said. "Luckily, we're already facing the way we want to go. Stacy, stay close behind me. The idea is to step along carefully and make the tent roll like a wheel on its edge."

"I hope we don't have to make any sharp turns."

We took a tentative step. As I put my weight on the plastic that curved up in front of me, it stretched until my foot was on the ground. Alarming stress wrinkles developed in the dome and floor. Abruptly the tent lurched forward. Stacy fell against me from behind. We both staggered, but we managed to keep the tent upright.

"What happened?" I asked Stacy over my shoulder.

"When I picked up my foot, the tent rolled forward and pushed me into you," she said. "If we want the tent to roll smoothly, I've got to take my trailing foot off the ground at the same time you put your leading foot down on the plastic. We'll have to march in step. I'll have to hold on to your backpack."

"Jesus Christ! All right, forward, march. Left, right, left, right, left, right . . ."

And so it went. The tent rolled along like a

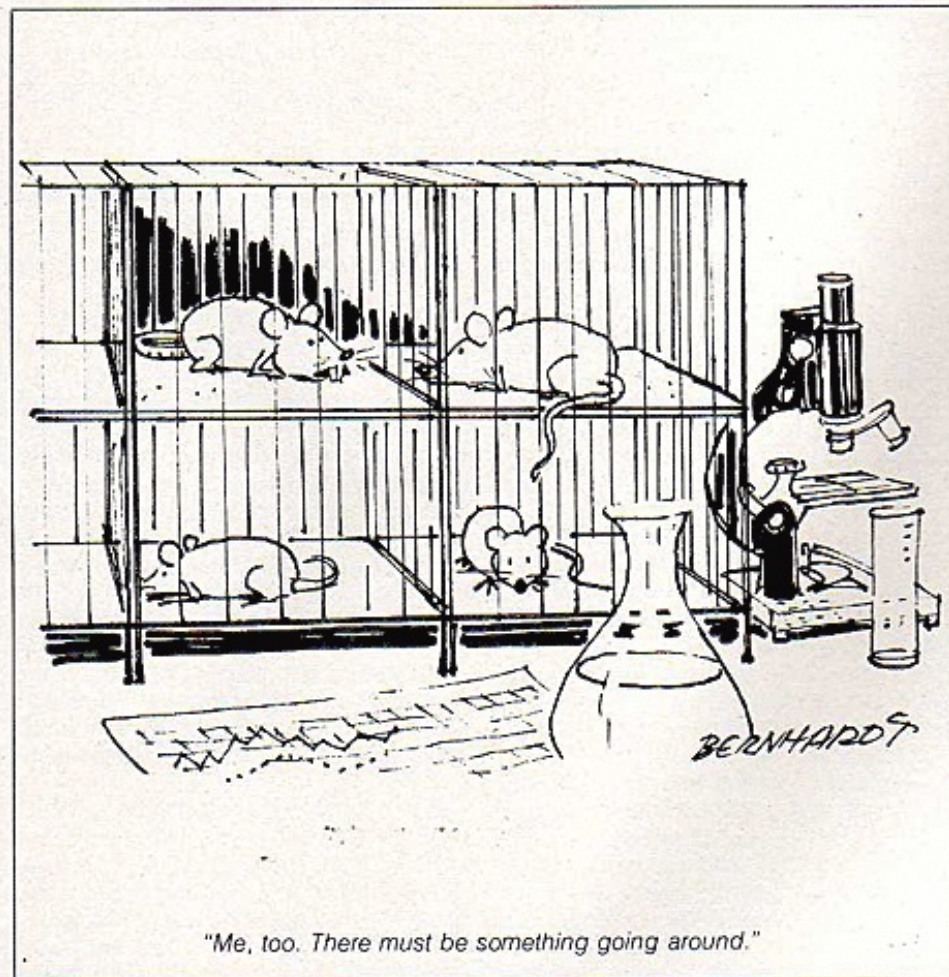
big wheel, wobbling this way and that, but never quite falling over. Whenever we came to one of the huge boulders, we would walk a little to one side of the edge of the dome, forcing the tent to curve its path in that direction. Occasionally we had to stop and put the tent into reverse. Generally, I followed the footprints we had made on our way to the picnic site, but, as we came to more open country, I started taking shortcuts. I carefully avoided the rims of any craters more than a few meters across; I didn't care to find out whether we could develop enough traction to climb up out of one of them.

Things went better than I'd hoped. We moved steadily downhill, with me still counting cadence until Stacy yelled at me to shut up.

On and on we trundled the tent, my arches flattening in little craters, sharp little rocks jabbing my soles. As we tramped out of the dust area into coarser soil, I started worrying about puncturing the tent. There wasn't a single damn thing I could do about it at all. Stacy was cussing under her breath with pain as she marched behind me.

The blankets had turned to scraps and fuzz by this time, sliding down to the lowest part of the tent as it rotated. I attempted to walk on the stuff, but the effort threw Stacy and me out of step.

"Even if we had our boots with us," I said, "we probably couldn't wear them in this tent. The cleats would hurt the tent worse than the ground outside does."



"Me, too. There must be something going around."

"Yeah," said Stacy. "Let's keep moving." I didn't have a watch, but we must have gone on that way about three hours. We left the boulders behind us, and the air grew chilly in the tent. If the ground hadn't been warm, we would have had trouble with frostbite. The pocked fields of the moon were around us. It seemed as if we were making our way down the sides of an endless ash heap. My bare skin cringed from the sharp stars overhead.

"At least it's a nice cloudy day," Stacy said.

"What?"

"On Earth. We can see where we're going."

"Oh."

I wondered whether we could jump the tent over an obstacle if we had to. I was taking bigger chances, leading us into unfamiliar ground, trying to make our return to West Limb along a more nearly straight line than the route we had taken to reach the place where we had our picnic.

As we got closer to the base, the sloping side of Hevelius trended more to the west. The sun began to peep among the undulating hills on our right horizon. When we came to the first long strip of sunlight shining directly on the ground, it was like stepping on a hot griddle.

"Yow! Back up, quick!"

"Is your foot burnt?" Stacy asked.

"No, thank God."

"Will the tent plastic be able to stand the heat?"

"Oh, sure. It's designed for use on hotter surfaces than this. But we'll need to protect our feet with something."

We allowed the tent to topple over. Then we sat down for a breather.

"How far do we still have to go?" Stacy asked me as we bound our bruised and blistered feet with strips of disintegrating blanket.

"Less than a kilometer. The base is right around the corner of that ridge." Good thing, too. I had taken advantage of our halt to inspect the condition of our tent. The plastic was frosty and scratched and was obviously starting to wear out.

After tying up our makeshift booties, we got the tent up and rolling again. The remaining distance had to be covered more slowly than we had been proceeding. We were forced to go from one patch of shade to another. Crossing the strips of sunlight was hell. I felt as if I was being roasted in a bonfire. At each stopping place in the shade I tried to plan the next sunlight crossing so we could as much as possible avoid running over rocks. The tent plastic was beginning to make little crackling noises with each step we took. I kept slogging away on my throbbing feet. Whatever was bad for me was worse for Stacy, I knew.

At last, the base buildings came in sight. I never thought I could be so happy to see that dump as I was just then. "Stacy!" I cried. "You see that? We're almost there!"

I couldn't see her behind me, but I could feel her leaning heavily on my backpack.

"Don't stop now, honey. We're getting there," I said, doggedly pacing on. There were no more sunlit places to cross. I had to consider the problem of how to get inside the buildings. The quickest thing to do would be to head for the buggy hatch, the only airlock big enough to allow us to roll the tent inside without collapsing it first.

I explained all this to Stacy while we approached the buildings. "Fortunately, it'll be easy to get somebody to cycle the airlock for us," I said. "The trail to the buggy hatch runs right under the picture window of the staff bar and lounge. My instincts tell me it must be about Happy Hour now. The bar will be full of people. It'll be easy to attract their attention—"

Stacy came to an abrupt halt, jerking on my backpack so hard that I almost fell.

"What did you say?" she said thickly.

"Huh?"

"You expect me to walk in front of the West Limb Base staff bar and lounge during Happy Hour on Friday night stark-

• She had been carrying me through an ordeal so harrowing that it still gives me the creeps just thinking about it. We were sunburned salmon-pink; our feet were bleeding; we were in deadly danger of just standing there. •

naked?"

"Stacy," I said, turning to face her, "we're lucky to be alive, and—"

She burst into tears. "I can't. I won't."

She had been carrying me through an ordeal so harrowing that it still gives me the creeps just thinking about it. We were sunburned salmon-pink; our feet were bleeding; we were in deadly danger just standing there. She had bolstered my morale and kept me from despair. This was the first crack in her bravery and her sense of humor I had seen during the whole terrible thing. Some other short-tempered son of a bitch might have raised his voice at that point, but not I.

I held her close, then looked her up and down. My hands ran up her back, caressed her hair, fondled her breasts, rubbed against her downy belly. I almost wasn't aware of what I was doing.

"Stacy, Stacy, darling," I choked. "You'll be the most beautiful thing any of them has ever seen, you know." Just then my left ear popped. It had always been the sensitive one. The air pressure in the tent was falling. We had finally sprung the dreaded leak!

Stacy felt it, too. She grabbed the straps

of my backpack and whirled me around.

I stifled the impulse to bolt. "Double time!" I barked. "Left! Right! Left! Right! Left! Right!"

We were lucky again. Though fog was forming in the tent, I could see that the buggy hatch stood wide open. This was in violation of base safety directives, but I'll be eternally grateful to whoever was responsible. With me in front and Stacy clinging behind, we hustled across the open space in front of the window.

I caught a glimpse of round eyes, open mouths, and hands holding drinks in suspended animation. Porkner just happened to be tending the bar that night. He later told me that it was the only dead silence he had ever heard in that place.

Stacy and I ran into the airlock so fast that I got a black eye colliding with the inside door. Icepicks in my ears, heart slamming, I pounded at the airlock controls through the tent plastic. I managed to hit the EMERGENCY CLOSE button; the outer door clanged down. The tent folded around us as the airlock roared itself full of that wonderful air.

I staggered against the wall, fighting the tent. Stacy sat down hard on the floor. We were both gasping for air. I was about to say we had made it, or words to that effect, when I became aware of the sound of trampling feet and the murmur of voices from behind the inner door. The Happy Hour stampede had arrived.

Stacy ripped the plastic door off the entrance of the tent and stepped out. She said through clenched teeth, "I'll kill the first bastard who—"

"Hey! Suarez! You all right?" It was Porkner's voice, coming over the airlock speaker. He had won the footrace down the corridor from the bar to the buggy hatch. I jumped out of the tent and palmed the lens of the TV camera that surveilled the airlock.

"We're all right," I said into the intercom grille. "We, uh, we need some clothes."

"Already taken care of," Porkner's voice answered. "We've got a red light on the airlock panel out here. We'll have to open the hatch by hand. Stand by."

Stacy and I stood to one side. After much talk and clanking, the hatch opened a crack, and Porkner's arm came through, proffering a couple of white tablecloths. Blessed be the name of Porkner, and I'll never malign his spaghetti again.

Stacy and I emerged discreetly togaed, to the plaudits of the multitude, and entered the dusty buggy bay. Stacy was escorted to her quarters, and I had to answer a lot of questions. There were some sly remarks about my, ah, alleged physical state, which had not gone unnoticed as we sprinted past the picture window. I always say that it's up to us pioneers to point the way forward, as it were.

As for my relationship with Captain Cramblitt, her goodbye kiss at the shuttle pad the next day seemed promising. The next time I saw her, she asked me whether I wanted to go skiing. We were on the north polar icecap of Mars at the time, but that's another story. **OO**

SCIENCE FICTION AND SURVIVAL

BY BEN BOVA

It struck me, as I sat watching the movie *Alien*, that readers of science fiction are better prepared to face extraterrestrial emergencies than movie people are.

Here was a shipload of officers and crew, scared to death because they had set aside the rules and had brought a voraciously carnivorous, thoroughly nasty alien creature aboard their vessel, and they didn't know how to get rid of it.

"Jump into your spacesuits and open all the hatches!" the science-fiction readers among the audience shouted.

The actors playing the idiotic crew of the doomed ship *Nostromo* ignored that advice. Until the very end of the film, of course, when the last remaining member of the crew donned her spacesuit, opened all the hatches, and blew the alien into the final credits.

Okay. So they had to give the audience a couple of hours of chills and frights for their price of admission. But most science-fiction readers lost interest in the film very early, simply because they knew how to handle the alien and because the crew of the ship obviously didn't.

This set me to thinking. There are lots of things that science-fiction aficionados know so well that they take the knowledge for granted, and they assume that everyone else knows these things, too.

Not so.

For instance, consider the problem of First Contact. You're in a spacecraft, way out there among the stars, and you meet the spaceship of an alien race. You exchange pleasantries with them. After all, it's not every day that you make contact with an intelligent extraterrestrial species.

But you don't tell them where your home world is!

The aliens may seem kindly disposed,

but how much do you really know about them? Perhaps they're aggressive, carnivorous, sex-starved. Anything is possible. You certainly don't want to invite them to Earth until you are absolutely certain they won't wipe out mankind or enslave us, use us for pet food, or steal all our wimmin-folk. As H. G. Wells once put it, when a highly superior extraterrestrial race tells us that they want only "to serve mankind," we should inquire whether they wish to serve us baked or fried.

Yet what have Carl Sagan and the astronomers done? On each *Voyager* and *Pioneer* probe that's been hurled out beyond the solar system they have put maps aboard that tell any alien with eyestalks exactly where Earth is!

Just because it may take a million or more years for these Judas-goat spacecraft to reach another star system is no reason for us to feel safe or complacent. We do care about our descendants' welfare, don't we?

There are all kinds of survival facts known to readers of science fiction that the average person has never even thought about.

No matter where you travel, you really don't have much to fear from alien germs. Persons who don't read science fiction worry about contracting some alien disease only slightly less than about being gobbled up by an enormous alien carnivore. Neither threat is much of a possibility, in actuality.

Alien critters—microscopic or mastodon-sized—are *alien*. Their biochemistry is not our biochemistry. Earthly viruses and bacteria make us ill because they are adapted to our biochemistry and can live parasitically upon us.

Alien microbes can't. And won't. Sure,

NASA put the Apollo astronauts into quarantine on a "better safe than sorry" policy. And Michael Crichton got rich and famous by scaring millions of people with *The Andromeda Strain*. But science-fiction readers were bored with both NASA and Crichton. We could have saved a lot of money there, if the rest of you had listened to us.

However, human biochemistry is probably poisonous to alien creatures. And vice versa. If you ever visit extraterrestrial resorts, don't drink the water! If an alien carnivore takes a bite out of you, it may be unpleasant for you, but it might prove fatal to the alien. The chemicals that make us strong and healthy may very well be poisonous to an extraterrestrial. (Another strike against the film *Alien*.)

There are seemingly endless implications here for extraterrestrial sex, but these are clearly without issue.

Further survival hints known to science-fiction aficionados:

You will never die of loneliness in space. No matter where you are marooned, all sorts of "people" and/or things will drop in for visits. Just read the literature. Even Robinson Crusoe had his hands full before too many chapters had gone by.

Perhaps the most important piece of survival knowledge that is familiar to science-fiction readers and few others is this: In most movies, scientists are portrayed as having the intelligence and moral scruples of movie producers. (That is, virtually none of either quality.) This is not true in real life. Scientists are about as intelligent and morally straight as, say science-fiction authors.

Therefore, we have very little to fear from scientists. They are really fine people, for the most part. But we do have rather a lot to fear from movie producers. ☐

THE MAN WHO WAS MARRIED TO SPACE AND TIME

BY FRITZ LEIBER

Old Guy Manning was in love with space and time all his life, not only during the months preceding his mysterious yet oddly unspectacular disappearance. He didn't write poetry about them, although he sometimes spoke of them poetically, and it did not lead him to become a professional physicist or astronomer (the stars being supreme examples of distance and of great use in timekeeping). No, it was altogether a humbler sort of affection, and in his last years, after his wife's death (there were no children) and his retirement from his minor editorial job, when he was living alone in a big-city apartment he leased by the year, it had some of the humdrum elements of a long marriage. It was the sort of affection or devotion that kept him interested in science and science-fiction all his life, kept him staring speculatively into the distance and, toward the end, kept him compulsively concerned with small numbers and with counting (which is, after all, the simplest way we measure both time and space).

And yet this humble, humdrum, rather metaphysical love was so obvious to the few friends of his last years that none of them was exactly startled by the fanciful suggestion made, after his casual yet eerie disappearance, that old Guy had somehow melted away into space and time, that he had become "married" to them in the sense of having merged with them.

And indeed, old Guy Manning's disappearance did have an unstudied air to it, as if he had simply stood up one day (as if going to get a drink of water) and walked out of life, or at least away from life as we know it. Though in what direction that would be, it's puzzling (perhaps meaningless) to ask.

It was Joan Miles who made the fanciful "melting into space-time" suggestion. She was a mildly eccentric young person, unseriously addicted to astrology, white witchcraft and other

pastel superstitions, who had the distinction of living and keeping time by her personally-embellished lunar calendar, in which all the full moons have names, not just the Harvest and Hunters. There are the Sowers Moon and the Loners, for example, the Ghosts and, of course, the Lovers. By her calendar, incidentally, old Guy Manning disappeared on the night of the Murderers Moon, the one nearest the summer solstice, the full moon that steals across the sky low in the south, latest to rise and earliest to set, short-lived and dim.

Manning's other young friend (who was also Joan's friend) was Jack Penrose, a restless chap with a keen interest in both the occult and science, and with ambitions of becoming a writer of fantasy romances. He was the one to whom Manning told some of his dreams.

Then there was Mr. Sarcander, a sallow and lean-jawed clinical psychologist who worked mainly in geriatrics. Originally Manning had consulted him about his recurrent depressions, but their relationship had become social also. Those who knew him well found Mr. Sarcander the most cynical and sardonic man alive, shockingly harsh in his evaluation of human motives, and they were occasionally hurt when he applied such value judgments to them or their friends. Actually, however, Mr. Sarcander was harshest of all on himself, expending all his optimism, flattery and cheerfulness on his patient-clients, reserving his honesty for the people he could relax with.

Finally, there was the amiable and tolerant Dr. Lewison, Manning's medical doctor, with whom he had something more than a purely professional relationship. He had keys to Manning's apartment, as did Jack Penrose.

These four persons had become mutually acquainted while Manning was still alive (undisappeared, rather) and after his

PAINTING BY DON IVAN PUNCHATZ



vanishing, they met a few times to talk about it and him, especially when police investigations developed no leads—or any push at all, for that matter.

Such was the surprisingly small circle of Manning's last friends, unless we include (and we probably should) Mr. Breen, a burly, dark, not unhandsome Irishman with permanently bewildered eyes and given to fits of absentmindedness, who was the apartment manager of the building where Manning lived on the top floor. Breen wasn't the first to notice Manning's absence (Joan was), but he made a small discovery in connection with it that became somewhat puzzling as he recalled more of the attendant circumstances.

"I was up on the roof," he said, "when I noticed this small ring of keys sitting on one of the steps leading up to the little room over the elevator shaft. Right next to the edge of the roof, too. At first I didn't think of Manning especially, but then I remembered how he'd go up there once or twice a day—nights, too—to check out the weather or the stars. I remembered times when he'd forgotten and left other things in about the same spot—his pipe or matches or a half-filled cup of coffee, and once his binoculars. So I checked out the keys and they were Manning's. Which is sort of funny because you need them to get down from the roof. The one for the front door to the building also unlocks the roof door. The police have them now."

"No," Jack Penrose contradicted, "the lock on the roof door doesn't snap shut unless you make it. He took me up there several times and he always left the door hanging ajar and then pulled it tight shut, so it locked, after we came back in. And even if you were locked out on the roof without a key, you could always climb down the outside ladder to the fire escape."

"That's true," Breen admitted, frowning doubtfully.

Dr. Lewison smiled to himself, thinking of how lightly young people contemplated such athletic feats.

Meanwhile, Joan Miles was visualizing an ovoid space shuttle landing silently on the pale, tar-set gravel overhead by the light of the Murderers Moon. And a door opening in its glassy skin and old Guy Manning bowing courteously toward it and then climbing inside. He wouldn't have needed a key to get down from the roof then, she thought. Or any Earth keys any more, if it were going to be that sort of journey.

What she said was, "He had a way of narrowing his eyes and moving his head around from side to side as he looked out at the city. I wondered about it, and then I realized he was lining up things very precisely—buildings, flagpoles, clouds, stars. He'd move his head the same way when he used his binoculars. He was learning all the stars, he told me once, not just the constellations but also the smaller asterisms that make them up and often look so much alike. He said it was a job that would last out

his time. He had a geometric mind."

Mr. Sarcander snorted faintly. "Old people," he said, "are forever checking out their eyesight, trying to prove to themselves that it's as good as ever—or even better."

Jack Penrose said defensively, "He was very careful about all his sensations. They were more like observations. He paid attention to details. He watched the city—almost as if that were his special job."

"All old people do that," Mr. Sarcander said. "You see their white faces at windows and in shadowed porches. They watch their little worlds, their microcosms in which each has become God. They're waiting for their miniworlds to crumble. It's the only occupation life has left them."

"Mr. Manning," Joan murmured, "became more and more immersed in distance and duration."

And indeed that was a very fair way of describing the way Guy Manning's life had gone. Early on, he'd traveled as much as he could, experiencing distance that way. He'd liked to watch the sea. Later, this urge had expressed itself in a love of maps. He liked to measure distances on them with a small ivory ruler he carried. When he took walks, he'd head for the nearest hill or high place so that he could watch distance emerging from the scene around him as he mounted. And always there were the vastly far, infinitely regular stars at night, or the clouds filling the middle distances. During one period his interest shifted to great interiors, those of cathedrals, industrial assembly buildings wherein small aircraft could fly and huge extraterrestrial structures such as those envisioned in Arthur C. Clarke's *Rendezvous with Rama* and John Varley's *Titan*.

As with distance, so with duration. At one time of his life, he was greatly interested in clocks, and if he'd had more money, he might have become a collector and ended up with a house full of tickings and chimings. But, in the long run, he was more drawn to the commoner and more ordinary aspects of timekeeping, the adjustment of watches and alarm clocks, the calls to Time of Day, the counting out of seconds accurately, the estimation of the duration of a moment of awareness (that vital surface which patches together the subjective and objective, the mental and material, the microcosm and the macrocosm), and the slow circling march across the sky of the timekeeping stars.

"He never cared for those new digital watches and clocks," Dr. Lewison remarked, "especially the kind that show a black empty face until you press a button. Neither do I for that matter. For a wristwatch or clock, he preferred the simplest kind of face: upright black numerals evenly spaced, minutes marked around the rim, and three hands."

"I know," Joan Miles agreed. "He said you could see the face of time that way, judge its expression, and sometimes guess what it was up to."

Jack Penrose lifted his eyes. "He once

told me of a dream he'd had," the young man reminisced. "He was standing on this perfectly flat expanse of fine silvery sand. The illumination was general, but he knew he was in a desert. He could feel on his back the infrared rays of a very hot sun beating rhythmically down through a thin cloud layer. And, as if in time with the beating of those rays, he could feel the hard-packed sand vibrating very rapidly—about five or six tight tiny shakes to every one of his heartbeats, as if the earth beneath were quaking constantly. There was mist all around him, but it was slowly dissipating upward. As it rose, he could at first see nothing but the endless, silver, invisibly vibrating plain extending out in all directions. He felt terribly lonely."

"Then, as the mist continued gradually to rise, there came into view—about two miles away, he judged—a squat tower of considerable width. It was like a fort, really. Then he noticed two rather thin dark wings jutting out from the tower for miles and miles—an impossible job of cantilevering. He could barely make out the end of one of them in the far distance. And, as he swung his eyes back to the other wing, the longer one, and continued to watch it, he got the impression that it was moving very slowly toward him over the silver sand."

"At that point the mist rose higher. He noticed a shadow rapidly traveling across the plain toward him. He looked up and saw the tower's third and highest-set wing slicing through the misty air, a quarter-mile overhead, like a gigantic revolving dark scythe. He glanced down at his wrist to time the scythe's speed. . . . As he saw the skinny sweep second hand crawling rapidly around the silvery dial, he realized where he was."

"Trapped under a wristwatch crystal," Joan heard herself say. "Its ticking the vibration of the sands? Did the mists clear all away? Was it his room outside? Did he peer down?"

"He woke up feeling the watchband gripping his wrist oppressively. He'd forgotten to take it off the night before. He said you became more aware of tiny pressures like that as you grew older." Jack's eyes widened a trifle, and then he frowned—as though what he had just said had reminded him of another memory, one more difficult to disentangle.

"A wristwatch ticks five times a second," Dr. Lewison observed, "though it's harder for me to hear it these days. That compulsion of his to count, the concern with small numbers. You know, somewhere Guy picked up the habit of segregating his coins in different pockets according to their value. Then he acquired the additional habit of reaching in and counting them by touch. . . ."

"A test of tactile acuity!" Mr. Sarcander put in sharply. "The elderly reassure themselves that way, filling their empty time with little tasks, so they won't have to think unpleasant thoughts about what's coming."

"He had another habit involving small

numbers and counting," Dr. Lewison pressed on. "He'd read or been told by someone, he told me, about how people have been traced down by the characteristic pattern in which they tear matches out of matchbooks. That inspired him to experiment with different patterns of tearing out matches when he smoked his pipe — every other match in a rank, every third one, from in front, from behind, from the sides in, from the center out. Sometimes he said he'd give each match a weight, depending on its position, and try to tear them out in such a way that the two sides continued to balance without being symmetrical. . . ."

"Anyone tracing him would have thought he was a dozen different people," Jack interrupted, relieved to be able to grin at something.

"He told me about that too," Joan Miles said. "Eventually he came to think of the matches as actors on a stage, with the matchbook cover their backdrop. The trick was to tear them out so that you'd always have an effectively balanced stage."

Mr. Sarcander's brusque shrug told what he thought of such matchbook charades.

Dr. Lewison leaned forward. "But the strongest indication by far," he said, "of Guy's obsession with counting and the fascination small numbers held for him, was when he gave up chess for backgammon. In that game you're constantly counting and juggling small numbers in your head, combining and recombining them as you consider your move. In a way the largest number you work with is six, because there is none higher on a single die."

"As he explained it to me," the doctor continued, "one reason he made the change was that he'd come to think that backgammon is much more like real life than chess is. In chess you're operating in an ideal universe where all the laws and forces are known to you and where you control half of the pieces. You can make the most far-reaching and elaborate plans and nothing can upset them but your adversary. But, in backgammon, blind chance enters the picture on each move, at every throw of the dice. There are no certainties, only possibilities and probabilities. You can't plan in the same way as in chess. All you can do is make your arrangements so that whatever comes, good or bad, you can maximize benefits or minimize harm." His voice was growing more animated. "It exemplifies the Pythagorean injunction: Believe that anything that can happen in the world can happen to you. You can only fight on for victory or survival, while chance rains down its blows unendingly." He took a deep breath and settled back.

"Manning once told me of another dream he'd had," Jack Penrose broke in. "He was on this rather large, flat, square roof that seemed strangely familiar. It had a parapet, a little less than waist high. There was also a wall of the same height that went across the middle of the roof, dividing it into equal rectangles. Later in the dream, he figured it was the roofs of two buildings abutting

each other, because the central wall was thicker with a crack down its middle, and when he had to cross over that wall — as he did several times in the dream, moving rapidly — he was always afraid there'd be nothing on the other side or that something drastic would happen."

"It was night, with a heavy overcast and a biting wind that blew irregular splatters of rain, but enough light leaked up from the streets for him to make out his surroundings. He was wearing some sort of dark gray uniform — it felt uncomfortable and harsh to the skin, like a uniform — but without any insignia."

"He wasn't alone. In fact there were quite a few people on the roof, but they were all crouched down against the walls, just as he was, some of them alone, some in pairs and small huddles, and he couldn't see them any too well. During his whole dream, he never got to look one of them in the face — or address a single word to any of them, or they to him — though later on he occasionally got comfort, or at least a sense of safety, from being close to one of them and moving side by side without their ever looking at each other. They all seemed to be wearing the same sort of nondescript gray uniform as his own, only some — about half, in fact — were wearing uniforms of a lighter shade of gray. Being near one of these never gave him reassurance."

"Most of the time, the figures held very still, watching each other closely, he supposed, as he was doing. But every so often a couple of them would scurry-crawl along the wall and then suddenly hold still again. If one of them had to cross the central wall, he'd hump over it as swiftly as he could, always keeping a low profile. It struck him that their actions were a lot like those of soldiers practicing to advance across a broken field under enemy fire."

"And every once in a while he'd get the overpowering urge to do likewise. He'd crawl as fast and inconspicuously as he could for as long as he felt the urge. When it left him, he'd hold still wherever he happened to be, alone or beside others, but always as close to the wall as he could get. That part was like musical chairs, he said, except there was no music to tell you when to start and stop. It was only the urge that gave you those orders."

"He noticed that the dream soldiers in lighter gray always moved in one direction along and around the walls, while he and the others in darker uniforms always advanced in the opposite direction. When opposing soldiers neared or went past each other, the sense of peril increased. Whenever the light-gray soldiers moved, especially if Manning were alone against the wall, he'd huddle down, trying to hide his head, in horrid anticipation of one of them landing on his back or just so much as touching him."

"Yet, whenever that did happen, there wouldn't be any terrible pain or shock such as he anticipated, but only a break in the dream, a momentary blackout, after which

he'd be back at the point where the dream had started, or near it, and all that crawling and terrified crouching to do again in the windy wet darkness, and no comfort except sometimes a like-uniformed faceless gray soldier to crouch against, shoulder to shoulder."

"It was only when he'd at last made it all the way around and was huddled down with all the other dark gray dream soldiers and they began without warning to vanish two by two that he finally realized he was part of a backgammon game being played with living, feeling men. And as he waited his unpredictable turn to be borne off — to vanish, as it were — there began to build up in him a fear and a pressure. . . ."

Jack snapped his fingers as he broke off. "Pressure!" he said. "That's what I was trying to remember. Once, apropos of nothing special, maybe we'd been talking about science-fiction, certainly not backgammon. Manning asked me if I'd ever had the feeling of being under a kind of pressure that would suddenly squeeze me out of the world altogether, shoot me away in any direction like an appleseed or . . ."

"... or just melt away into space-time," Joan murmured.

"Seriously, Joan," Jack asked her, "how could something like awareness 'melt away' into the material world?"

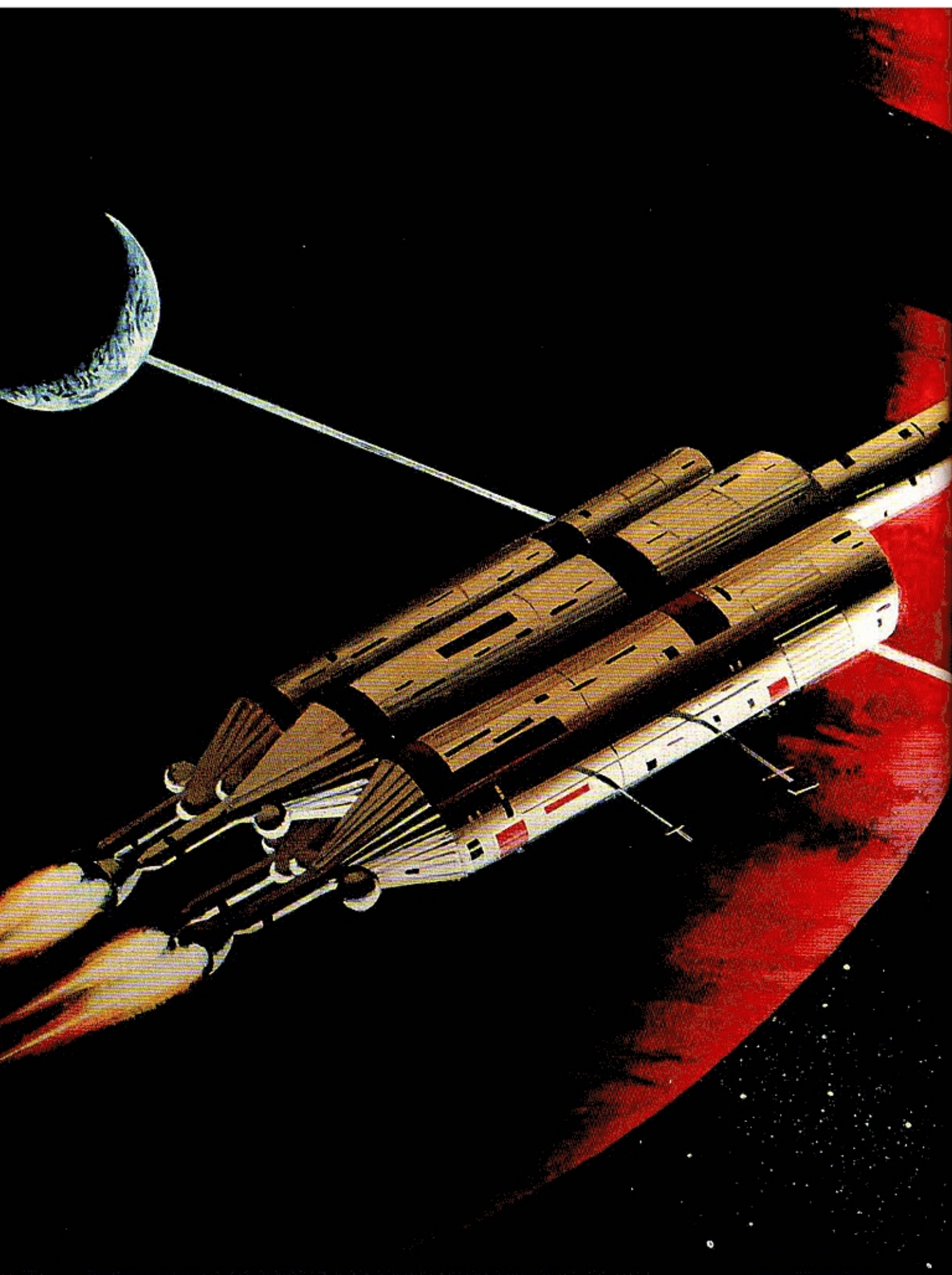
"Everything has an awareness side, even the atoms, else reality wouldn't balance out. Manning once said that. And I remember another thing he told me — that a person ought always to keep a packed suitcase handy, in case he were called away at short notice. Only I don't remember whether he said he followed his own advice."

Mr. Breen broke in. He'd been listening to everything with the same worried look. "I seem to remember there always used to be a little suitcase at the foot of his bed," he said. "And it's not there now." He continued to look worried and puzzled.

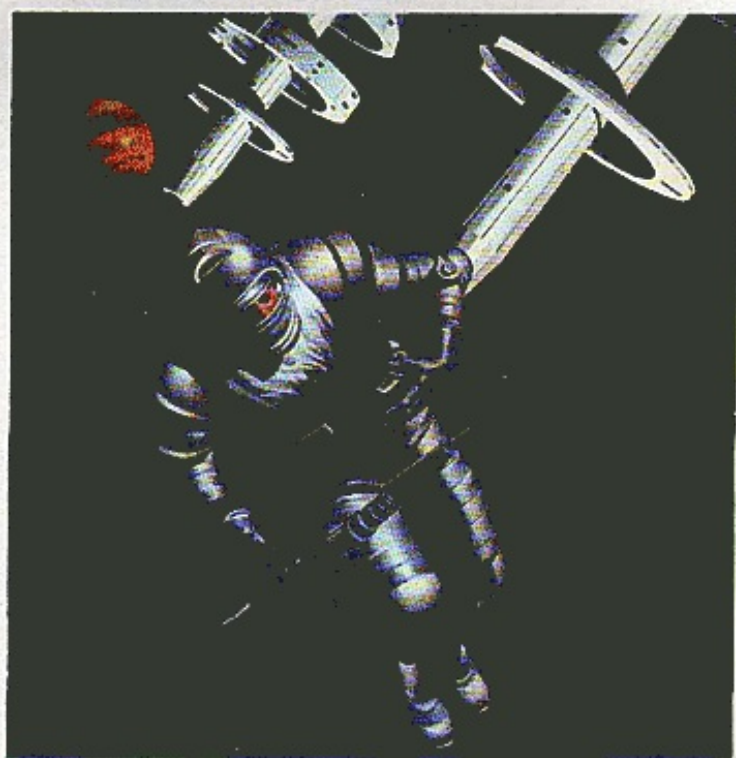
"After you found his keys," Jack addressed him, "I went up and searched every inch of the roof. I found three items that could have been Manning's — a backgammon doubling cube, a lens cap from his binoculars, and a matchbook with five matches left in a pattern of two side by side, one alone, and two one space apart."

"There's five of us," Breen groped. He touched the side of his head and winced his eyes. "I knew I'd remember," he said guiltily. "When I found the keys, they were on a scrap of paper, holding it down. I started to pick the paper up too, although I never thought it might be important then, but it blew off the roof. It was ragged along one edge, like it was torn out of a spiral notebook. I think it had writing on it, tiny capitals."

They looked around at each other for a while. Then, as by common consent, they went up to the roof together and watched the rising of the Loners Moon, which is also called the Overlapper, linking each year with the next. 



STELLAR TECHNICIAN

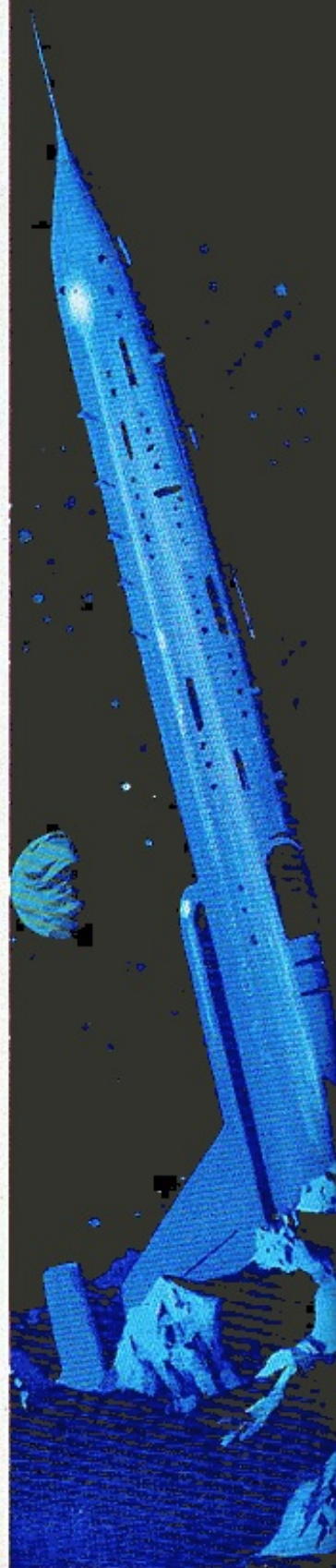


Dark,
moody, and powerful, the paintings
of Vincent Di Fate
depict mechanical marvels
and far frontiers
of a future technocracy
built on
complicated machinery
and human
resourcefulness.

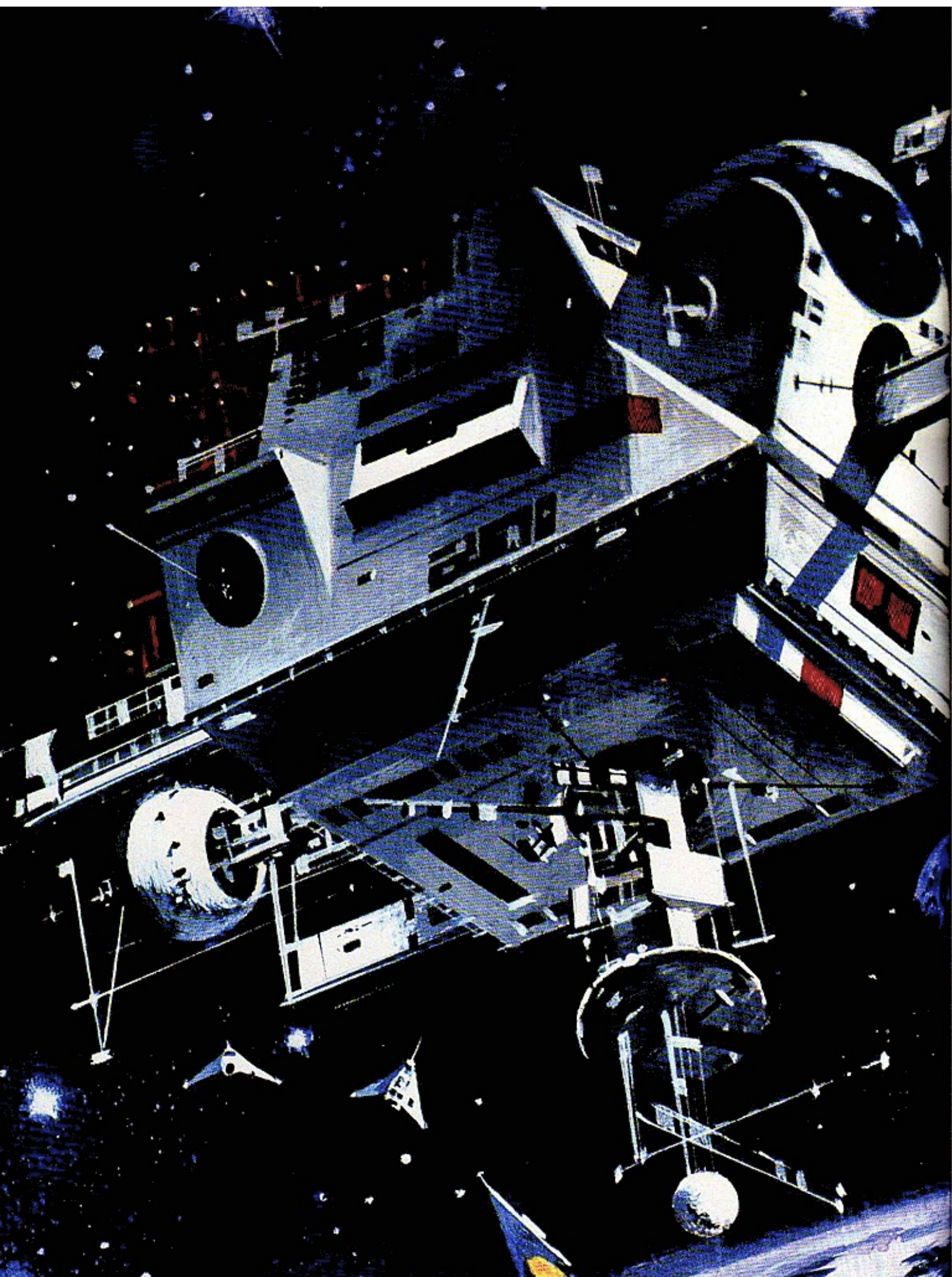
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With bold strokes and somber colors, Di Fate accents the powerful tools that will enable humankind to assert its citizenship in the universe. Our thrust outward toward the hostile environment of space makes us increasingly dependent on technology. “Even so,” Di Fate maintains, “it is man who must bear the responsibility for his actions, not his science or his machines.”

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GRAVESIDE WATCH

The time capsule would be buried there — but who would dig it up again? And when?

BY EDWARD H. GANDY

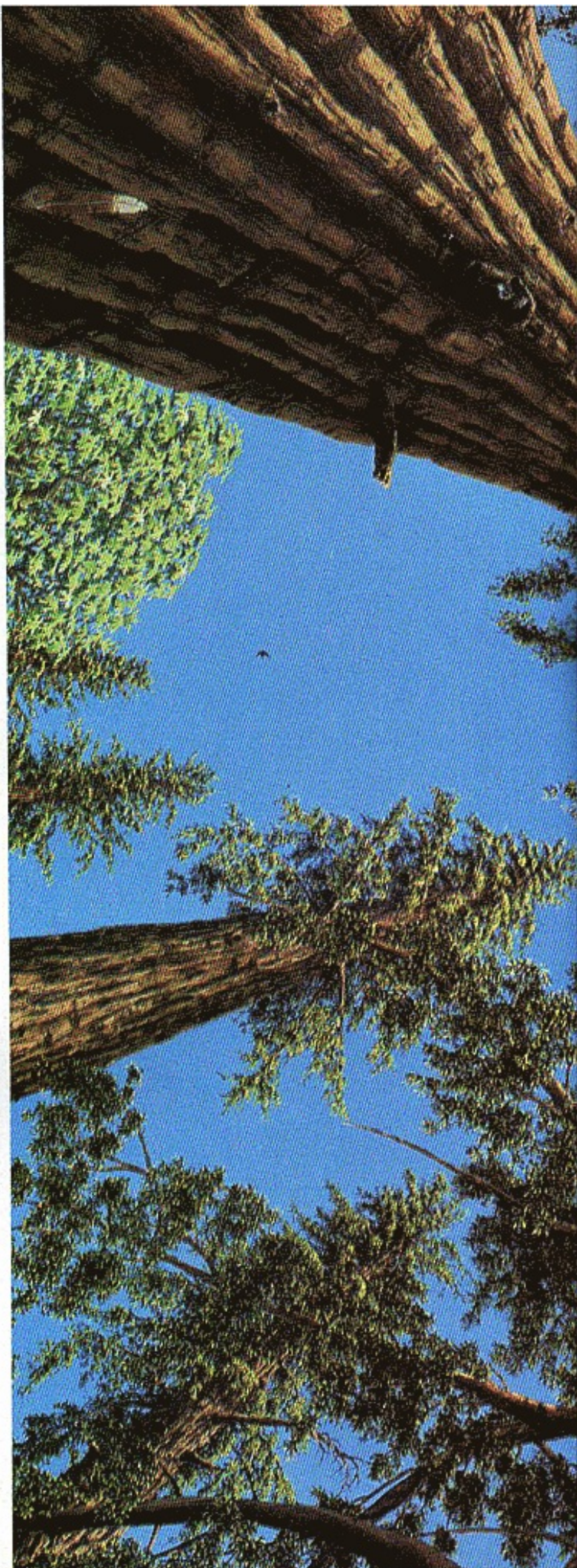
They just finished digging the grave today. We could bring our sleeping bags and lie beneath the stars all night," said Frank, pressing the phone receiver to his ear and waiting for her answer. He peeked inside the coin-return mouse hole of the public phone. There were no forgotten dimes, but someone had left in it a dead fly, to discourage refunds to the more timid. "Hell, every teacher gets bummed out at the end of spring term. That's why you're so depressed, Elaine. It happens to me, too. But a good view of the Milky Way puts the whole college year in perspective. What do you say? I hear it's very proletarian."

Using his shoulder to pin the receiver to his ear, Frank finished reading the graffiti on the side of the phone booth. Graffiti were important elements in anthropology. A bulletin board for the anonymous. A scratch pad for the long minutes on hold. Raw thoughts. Raw art. Raw life. He checked on the fly again. Still dead. He started to lean against the glass wall of the phone booth, but he slumped down, dejected.

"What? What do you mean? It's not like we're spending the night in a cemetery. It's the only grave there is on Raven Hill. And besides, it's not really a grave, just a huge hole."

It was hot in that little glass house on the sidewalk. After a couple of minutes he was

PAINTING BY GAGE TAYLOR





perspiring and speculating about photosynthesis. *Damn*. Two days in this phone booth would have saved Elaine's African violets. They died today. She was telling him about it for the fourth time. He opened the door, stepping back to try to catch some of the early evening breeze, but the phone cord wasn't long enough. They never were.

"I'll buy a loaf of bread and some wine," he cut in. "What do you say?" After a polite pause, Elaine took up the slack in the conversation with some straight talk about sunlight and humidity. Not to mention bugs—which she did.

Frank extended his arm, braced his hand on the phone, and did some more leaning. What else was there to do in a phone booth? He began thinking about tomorrow's burial. After all, he had a right to be proud of his efforts. He was only a teaching assistant, and yet he was the one who put in for the grant, landed it, formed a committee, and launched the whole time-capsule project. He even wrote up the press releases. Not to mention licking the postage stamps—which he did. Hundreds of them.

And there were other drawbacks. Like camping out on the top of Raven Hill tonight, to keep an eye on the hole. Not that anyone was going to steal it—the college president had assured him with a smile—but liability-insurance rates dictated the presence of a hole watcher. Trying to make the best of a bad situation, Frank had thought two hole watchers would better

demonstrate a genuine hand-in-hand effort toward casualty prevention. More specifically, it was a good excuse to spend the night under the stars with Elaine.

He could just see her white skin glowing in the moonlight, her softness contrasting with the ruggedness of the outdoors. He could see them slipping into the lush forest, rolling naked in the grass, bits of straw and pebbles clinging briefly to her dreamlike flesh, which fluttered at the slightest touch. . . . Unfortunately, the idea of exposing oneself to the universe next to an open grave did not sizzle when it hit the fire of other people's imagination.

"Ah, c'mon, Elaine."

Reality was no match against Frank's remarkable imagination. Never was and never would be. Even the psychiatrists had been unable to help. Frank had stopped seeing them long ago, but he was still paying the bills.

"Yeah, I understand. Maybe some other time. Right. Talk to you later." He slammed the receiver down on its cradle. *Great*, he thought, as he jumped into his car with his camping gear. *Cut to the quick by a dead plant*. The world was definitely after him.

Frank raced through town as if the world was gaining on him, although he knew he shouldn't be treating his Pontiac like this. He downshifted to take the steep incline of the hill.

He finally stopped his car when the pavement ended. The last quarter mile to the top was bare dirt. He decided against

allowing his car to get down on the flesh of the earth. Spinning wheels, groaning engine, soft shoulders, loose gravel, rocking back and forth in a hole that gets deeper—it was all too Freudian. He would walk.

Frank shook his head to nudge his thoughts in another direction. *Too much idle speculation*, he reminded himself as he shouldered his backpack. Always speculating on this or that. Problem was, "this or that" could run from the rational to the ridiculous in a flash.

He took a deep breath of pine-scented air to clear his head and then walked up the road to the grave.

Although the hill was thick with trees, there was a grassy clearing at the very top. Frank was almost there when, suddenly, he smelled smoke. He looked up and noticed a light. It was the glow of a flickering campfire. He moved to the side of the road and walked toward the edge of the clearing. As he got closer, he heard the crackling of the fire. Peering through a bush, he saw an old man in a tight vest and baggy pants bending over to pour himself a cup of coffee. Frank could see the open grave a couple of feet from the fire and a large mound of dirt next to the hole. The old man sat down and spoke without bothering to look up.

"Not five minutes ago I saw a snake glide into that bush you're hiding behind, son."

Frank gingerly stepped into the open and then became embarrassed at being flushed out of the brush like a common quail.

"Excuse me," said Frank, trying to appear casual. "But what are you doing here?"

The old man looked away. Frank's eyes followed his until they came upon a wagon, a medicine-show wagon. A lantern, attracting the attention of a number of flying insects, hung from a rusty hook at a corner of the old wagon. Frank could barely make out the dimly lighted sign painted on one side of the rig. The red lettering formed two half circles, one inside the other: G. O. SAGEHORN AND HIS TRAVELIN' MEDICINE SHOW.

"Want some coffee, son?"

"Wha—?"

"Coffee." He whistled sharply, and Frank stepped back at the sound of movement under the wagon. A German shepherd came trotting out. Frank thought the dog was beautiful even though it was quite dusty. The old man banged the side of the coffeepot with a stick, and the dog jumped into the back of the wagon. Moments later it came out with a tin cup in its mouth and ran up to him.

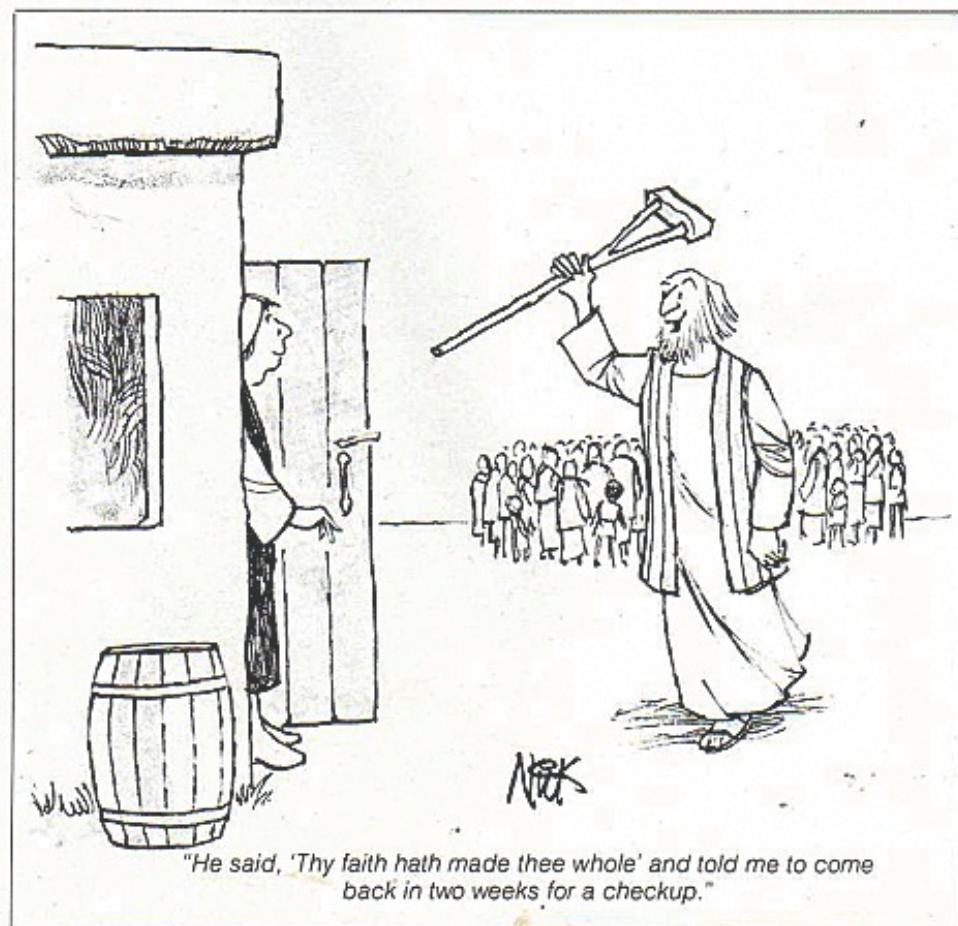
"Sit down, son." He took the cup and filled it. "What's your name?"

"Frank," he said, hesitating. "Frank Henderson."

"Well, I hope you like your coffee black."

"Ah . . . yeah," Frank said, sitting down rather slowly and eyeing the man.

"Good. Sagehorn's the name, and this is Plato." The dog raised its head at the sound of its name. Frank nodded to both of them



as Sagehorn handed him his coffee.

Sagehorn was an odd-looking man. His long hair and bushy eyebrows were white, his eyes watered, his nose twitched, and his face was pushed forward slightly, as if he were squinting into a strong wind. Indeed, Frank would bet that the old man could stand in front of a closed window and make it appear to be windy.

"Quite a hole," said Sagehorn, gazing at the grave.

"Yeah," Frank turned to look back at the wagon again, not sure of what to think. He noticed a horse by the trees. He could feel his boyish imagination rioting inside him, trying to get out but not succeeding. Frank was too edgy in these strange surroundings to be anything less than alert. A thought occurred to him.

"Did you come to see the burial?" he asked.

"Most assuredly. As soon as I heard about this time capsule, I packed in my show, put my horse and wagon in a truck, and headed for Oregon."

Frank gave Sagehorn a cold look. "Burial's not until tomorrow. Are you camping here tonight?"

Sagehorn surveyed Frank's sleeping bag and backpack. "I might ask you the same question." He seemed offended.

"Lighthouse keeper," Frank explained. "It seems that I've been elected to come up here and throw a light on the hole. Make sure some poor astronomy student doesn't drop out of sight in mid-stride."

"Yes, that would be a nasty fall."

Frank nodded. "Yeah, it's a deep one, all right. But the time capsule will be there for a long time."

Sagehorn smiled. "Yes, indeed. I'm sure it will. And, as a matter of fact, I have a plan that will determine whether the capsule will be found and opened a thousand years from now."

"Well, we've taken a few steps to make sure it will be found."

"Such as?"

"Nabbed a government grant. Need I say more?" But Frank did, for he never passed up a chance to talk about his capsule. "The capsule wasn't built in metal shop," he concluded, after running through a list of problems the subcontractors had had in building something that could survive for a thousand years.

Sagehorn seemed to be really interested. Intensely, almost like a child would have been. "What other steps have you taken to ensure its discovery?" Sagehorn asked.

Frank looked up in time to see a shooting star over the trees. He remembered searching the sky for them for hours when he was a boy. But shooting stars aren't really stars at all. He knew that now. Sometimes it was better to have a child's faith. At least it didn't get bruised as badly. He looked at Sagehorn and studied his wind-blown face for any hint of a second childhood. The old man certainly had one foot in the past, with that wagon. Question was, Where was his

other foot?

"Well," said Frank, "we've printed up hundreds of small books. They describe the time capsule's location and ask that it not be opened until the year 2980. In fact," and his tongue grew dry at the memory, "I spent most of last week mailing them out to museums and the rare-book sections of libraries all over the world. Even a few monasteries." He shrugged. "The time capsule will probably survive and be remembered."

"Well, if it is found and opened a thousand years from now, I'll know about it within two weeks."

Frank concealed a smile behind his cup. "Oh? How?"

"I'll show you." Sagehorn got up and walked over to his wagon. Brushing by the lantern and the insects, he climbed into the front of the rig and disappeared over the seat.

With cup in hand, Frank wandered over to examine the old sign more closely but became distracted by the lantern. It resembled the nucleus of an atom. Bugs became electrons in their various orbits. He turned and took a deep breath, to clear his head and cool his imagination.

But it didn't work. Through a break in the trees he could see the lights of the city in the distance. He searched through the pattern of quiet lights until he recognized those of the university. There was the glitter of Washington Boulevard, the street he and

Elaine walked down on the way to the campus—talking about their students, sharing the morning air. And over there—three streets down, just this side of the neon lights of Manchester Boulevard—that was her street. And over there, that dark area must be the park. No ... the golf course maybe ... no ... not big enough ...

Sagehorn swung back over the seat and dropped to the ground. The wagon squeaked and nodded its relief. "Just put this inside your time capsule." He held out a small metal box.

"Capsule's already full. Invention of yours?"

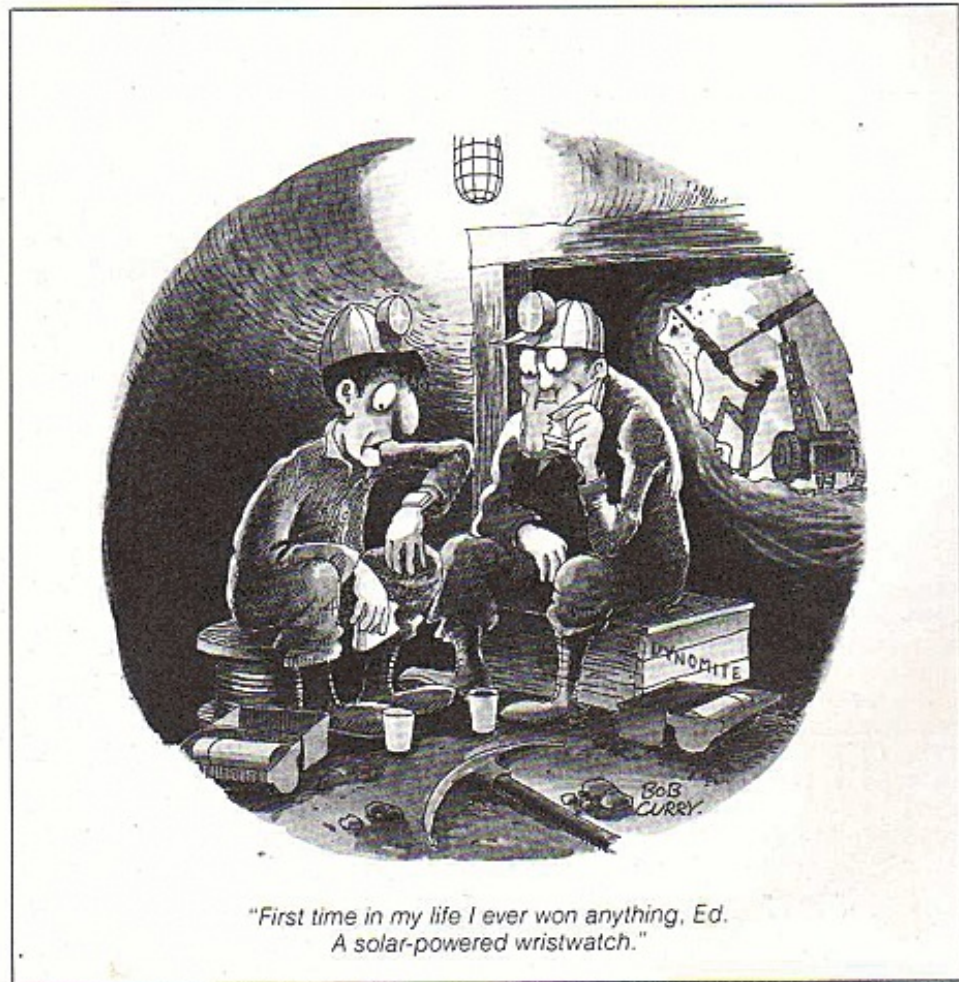
"Hardly. To talk to someone from our future does not require some sort of invention." He raised, or rather hoisted, his heavy eyebrows. "Simple logic will suffice."

Frank looked down and aimlessly swirled the coffee around in his cup. "Logic? To talk to someone from our future?"

"It's based upon a simple theory of time travel. Lecture circuit, you know." He tugged at his vest. "Speak at colleges, county fairs, outdoor festivals, and such, using the frontier medicine show as my format. Adds a bit of flavor to my lectures. Although, I confess, it's my card tricks that bring the people to my wagon."

"Well," said Frank, looking back over his shoulder, "I think the wagon itself would suffice, I mean, draw the crowds."

Sagehorn didn't see the humor. So Frank



"First time in my life I ever won anything, Ed.
A solar-powered wristwatch."

cleared his throat to suppress the tickle in his thoughts. They both walked back to the grave and sat down. The fire was warm, and Frank was glad to be next to it again. He heard the wind start to blow—first in the trees to the left, and then in the trees over the wagon. He wished he was here with Elaine instead of this crazy old . . . con man? Maybe. Sagehorn was obviously trying to arouse his curiosity. But why? Frank finally relented a bit. "What's your theory about time travel?"

Sagehorn poked at the fire with a stick and smiled. "Simply put, that there are time travelers among us right now."

Frank began swirling his coffee again, and the fire crackled in agreement.

"Really," Sagehorn said, "it's a most logical theory if you assume that man will eventually accomplish anything he puts his mind to. In a thousand years he will most assuredly discover the secret of time travel. He will journey into his past to discover how the Pyramids were built, to attend the trial of Socrates, to witness the crucifixion of Christ. So it must be logical to assume that there are time travelers among us right now. Only problem is flushing one out into the open. And I have a plan that will do just that."

"I see. What's your plan got to do with my time capsule?"

"Your time capsule, if it survives a thousand years, will be opened by a society that has the ability to travel back through time."

Frank rolled his eyes up in disbelief.

"Impossible?" said Sagehorn.

"What, time travel? The whole concept contains too many contradictions."

Sagehorn looked down at his metal box and rubbed the edge of it with his index finger as if there was a smudge on it. "Contradiction is a most tricky word, son. After all, what's in a contradiction?"

Sagehorn let the question dangle in the wind for a moment while he pulled a cigar out of his vest. He bit off one end and employed the grave as a spittoon. "Point of view."

"Oh?"

"For example, twenty-five hundred years ago Pythagoras claimed the earth revolved around the sun. Well, anyone could see it was the sun rising and setting. So obviously, from their point of view, it was the sun doing the revolving." He pulled his stick out of the coals and lit his cigar with it. "Ah," he continued between puffs, "but that apparent contradiction didn't disturb Pythagoras in the least, not in the least."

"Truly admirable of him, but we've progressed a little since then."

"Exactly! In the past thirty years we've advanced more in science than in all of history. For the first time we're experiencing a geometric progression of knowledge. Our scientific information is doubling every five years. My God, if that acceleration rate remains the same, then we're talking about doubling something two hundred different times before that capsule will be opened."

Why, take a single penny, double it twenty-seven times, and you're a millionaire! Twenty-seven times! With that kind of acceleration of learning, can you imagine what will happen after doubling our knowledge two hundred times? Can you really say that time travel will remain an impossibility forever? Well?"

"Okay," said Frank, too tired to face off and go toe to toe with him on a verbal mat. He was beginning to realize that he was outclassed anyway. Sagehorn might be crazy, but he was also well prepared to defend his theory.

"So, what's in the box?" Frank asked.

Sagehorn grinned, picked up the box, and brushed some imaginary dust off the lid with the back of his hand. "A scroll that tells a most interesting story. Used a special paper and ink to ensure that it survives the thousand years. Yes, I've baited this hook very carefully."

"What are you using for bait?"

"Well, what better way to lure a time

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down . . . without
bothering to look up.*

traveler out into the open than with another time traveler? Specifically, a supposedly stranded time traveler in need of rescue. I mean, if they do any kind of exploring in this time dimension, they're bound to lose a few poor souls. People who never come back from their journey through the past. People lost in a strange dimension, stranded in some ancient era. An Amelia Earhart—type of disappearance in the oceans of time. I think it's safe to assume such an occurrence."

"Murphy's Law."

"Precisely. And suppose you were a time traveler grounded in the twentieth century. How else to get a message to the future, telling of your plight, than through a time capsule?"

How else, indeed? It struck Frank as an interesting notion. He couldn't help thinking about it for a moment. "One question," he said. "As I understand it, your scroll portrays a time traveler stuck in this century. Now, it seems to me that our language is bound to go through some drastic changes in the next few centuries. Wouldn't a real time traveler jot down his S.O.S. in some language of the future?"

"Ah, but the scroll is never purported to be written by the time traveler himself. It's written by a friend who knows of his true origin, who helps him survive in this primitive century. Unfortunately, the time traveler himself has become delirious, and the friend is worried about him having a mental breakdown, going crazy, becoming most dangerous. So he tries to get a message to the future."

Frank pressed the palm of one hand against the knuckles of the other. Three knuckles discharged, each at a different pitch. There was a dangerous logic to Sagehorn's theory. In a weaker moment, Frank might have embraced that logic. Maybe. He glanced up at the stars. One of them seemed brighter than the others, but he knew that the light he was seeing had left that star thousands of years ago. For all he knew, the star might not be there anymore. Sometimes it was better not knowing.

"Well, even if I believed in your theory, I couldn't get your box in that capsule anyway. The contents are already laid in there like a three-dimensional puzzle. Nothing more will fit."

"Smuggle it in. Remove something and put my box in its place."

"Remove something—for a box and some half-baked theory?"

"I'm a time-capsule seeder. Been seeding time caps for the past twenty years. My theory is hardly . . . half-baked."

Frank was disappointed, although he didn't know why. "You mean, this isn't your first?"

"Ah, no, son. I'm afraid it isn't." He frowned, but then his face brightened. "But yours shows the most promise for survival. Prospects are as good as those for the capsule the Northingale Corporation buried back in Sixty-three. However," he looked off to the side for a moment, "apparently it will never be found."

"You've been testing this theory for the past twenty years, and it's never worked?"

"Time caps are tricky. Some will be dug up much too soon. Say, one or two hundred years at the most. Well before the age of time travel."

Frank felt sorry for the crazy old guy. Twenty years! He wondered how many he had "seeded" and then chuckled at the thought of future scientists scratching their collective heads. "I just wish I could be around when they open up a capsule and find one of your scrolls."

"Oh, they'll probably start popping them open in the next century. Course, they might think the first one amusing, as you do."

Frank raised his eyebrows in a polite protest.

"But when they discover that the second, third, fourth—" He stopped and extended his arm to indicate a whole crop of capsules. "When they see that almost every long-range time capsule buried in the twentieth century has the same message in it, they may find it most disquieting."

"And you're counting on that, aren't you?" Sagehorn raised his shoulders and made his neck disappear. "Sure. That's the kind of mystery that legends and myths are spun from. If my time caps don't survive hundreds of years, maybe a fascinating legend or two may."

This was too well thought out for Frank to simply dismiss it. The plan had some depth to it. Suddenly Frank realized that he was in the presence of an imagination as wild as his. A fellow sufferer! Was *this* the old man that he would become in thirty years? A hopeless dreamer with a curious obsession?

Instinctively, he picked up the box and carefully tried to open it, as if it would allow him a glimpse into the future.

"It's sealed," said Sagehorn.

"Why?"

"An extra precaution. The scroll is preserved in a vacuum."

"Oh?"

Frank turned the box over in his hands a couple of times. It had an oily film on it, like a new pair of garden shears. He could even smell the greasy freshness of the metal. He set the box down.

"Just curious about what you had written on the scroll."

"Time and place is the essential part. But most of the scroll is simply a carefully written portrait of a delirious time traveler stranded in this century. However, the gist of the matter is that I promise—in the

scroll—to bring my time traveler friend to a specific location at a certain date and time to await a rescue attempt. Exact time and place, mind you. Therefore, when they receive this message, some time travelers will be dispatched to the Raven Hill Tavern."

"The tavern?"

"That's where I'll be at exactly five P.M., a week from Friday. I've already described my physical features in the scroll. So, if my plan works, then some actual time travelers will contact me there."

"And you'll prove their existence."

"Precisely."

Frank raised the cup to his lips and eyed Sagehorn over the rim. So far he had managed to confine his observations to just the theory. The theory held up, but what about the old man himself? He hesitated when it came to Sagehorn. Somehow he could sense a magic in his face. Or his voice. Or was it just his own imagination? Well, sometimes it was better not to know how the trick was done.

But the questions kept coming. Who was this old man? Where did he come from? Was he crazy or brilliant? There were too many questions, and despite the man's appearance, Frank knew that Sagehorn had the razor-sharp, steel-trap mind that could tear the meat off a convoluted question. He paused and then held out a bony "Why?"

"Why what?"

"Well, why have you spent twenty years—"

Suddenly it hit him. What the whole conversation had been leading up to but never quite touching. The thought burst into focus, stunning him for just a moment. Was reality finally outstripping his imagination? Had he been overlooking his basic anthropology?

He had to know for sure.

"Okay, Mr. Sagehorn," he said, finding his voice again. "I'll get it in the capsule."

Sagehorn smiled, reached down to pet his dog, and then raised his cup to Frank.

"But I just had an interesting thought," said Frank, recovering somewhat and joining in the toast. He took a sip of his coffee and then set it down next to the fire. "Don't know why I didn't think of it before."

"What's that?" asked Sagehorn.

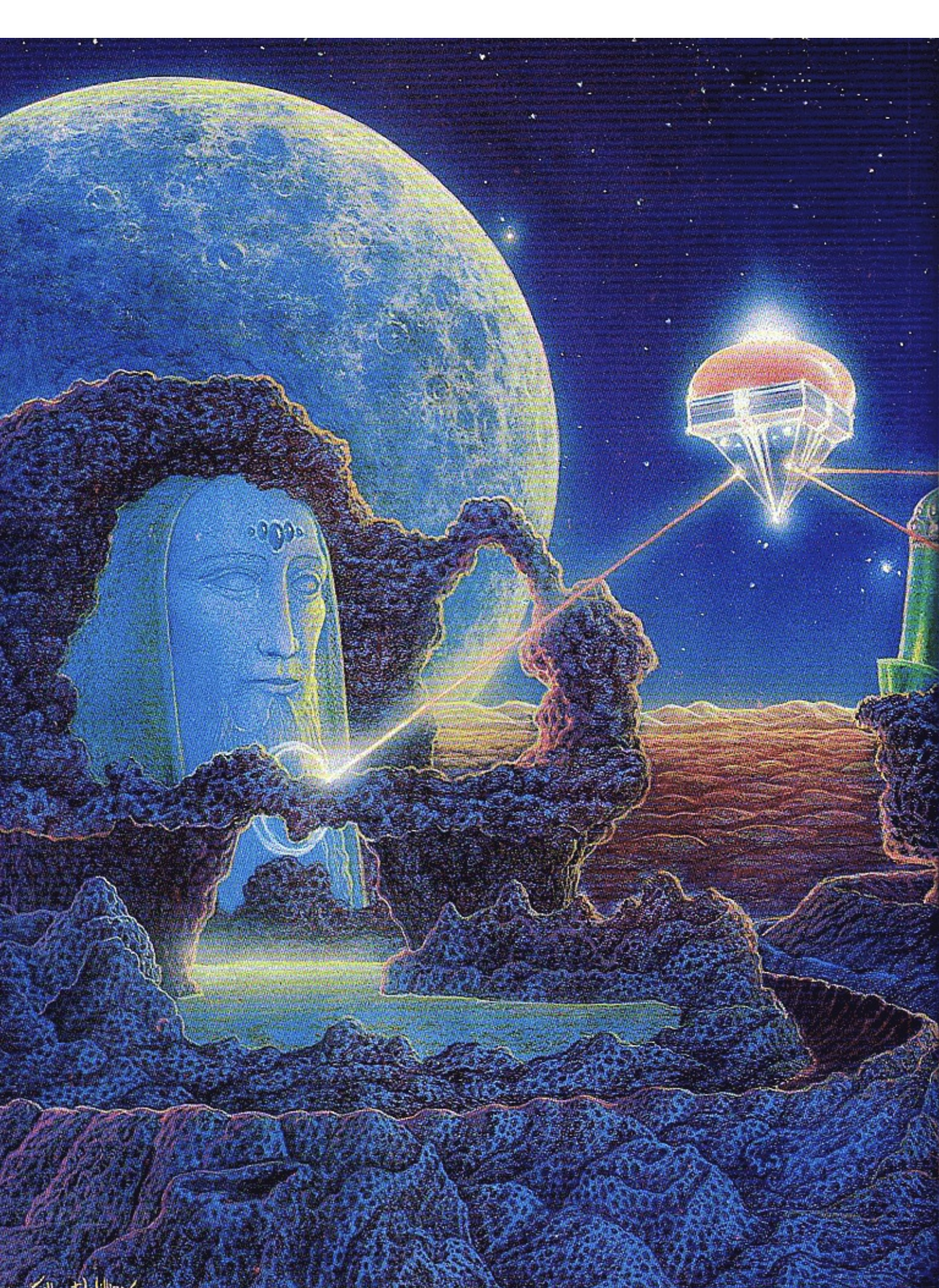
With hands clasped behind his head, Frank leaned back against his camping gear and gazed up at the glittering stars. They glistened with the polish of time. A few even winked at him.

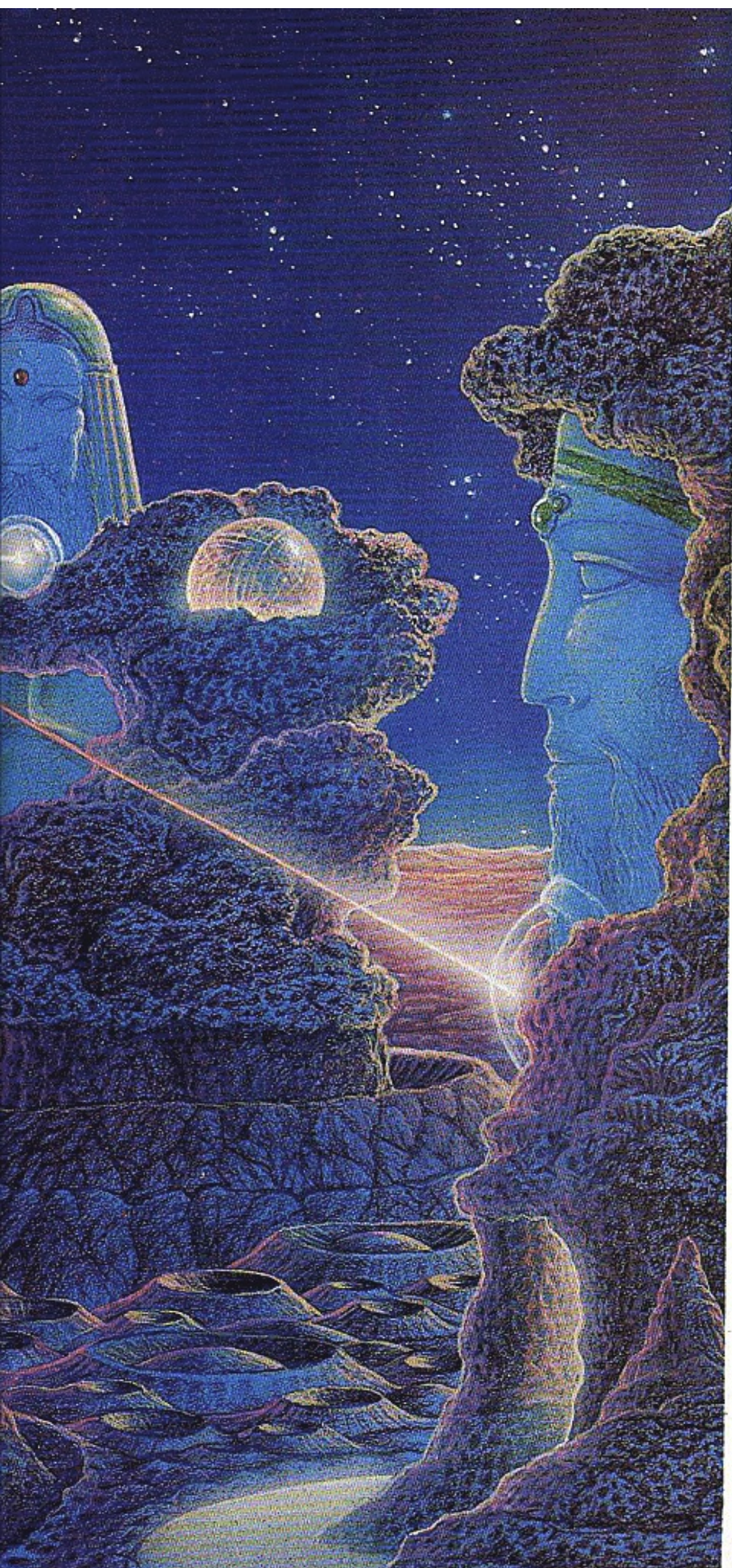
"Well, Mr. Sagehorn, suppose there *really* was a time traveler stuck in this century. And suppose that a time capsule was, indeed, the only way he could get a message to the future. Now, the question is," he glanced back at Sagehorn, "How would this time traveler go about convincing someone to smuggle his message into the capsule?"

Sagehorn shrugged, but he couldn't hide the twinkle in his eye. "Oh, he'd probably think of something," he said with a wink. 



"Of course I'm listening to you, Harriet. You said you were a Martian."





*They were a wild,
turbulent race of savages,
and studying them led to
danger, madness*

THE EMPATH AND THE SAVAGES

BY JOHN MORRESSY

The Anpreene observed the onrush of human history with cold curiosity. They were perplexed by a race so heterogeneous and so volatile, and fascinated by a planet so perfectly suited to the projected needs of their own people.

Water was abundant on this world, and the atmosphere was rich. Wherever this world differed from the home worlds of the Domination, the difference favored the new planet.

Its dominant race was energetic, with some physical resemblance to the earlier, smaller stages of Anpreene development. It appeared strong enough to provide useful servants while not sufficiently durable or intelligent to be a source of danger. The residents of this pleasant planet were brisk, scampering little creatures who lived their lives at an incredibly accelerated pace. Study of them promised to be interesting.

The Anpreene were a long-lived people; their ways were methodical and unhurried. They investigated every action and its possible consequences with great care and did not undertake a conquest lightly. Their race disliked surprises.

Concealed from human perception, they narrowed the focus of their instruments, closing on a suitable objective. Earthly years whirled by beneath them, and earthly creatures scurried through their little lifetimes. The selector focused on a sequence of events and probabilities. It locked

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GILBERT WILLIAMS

on a single person and a single instant. The Empath and the Conceptualizers took their places around the selector locus, and the Assessors gathered to observe.

The selector hummed. The Anpreene ship, the surrounding space, the narrow gathering beam that reached downward to the robed figure, and the heap of smoldering green wood were all instantaneously plucked from the weave of space and time and held suspended in an otherwhere and otherwhen. The first specimen was drawn aboard the ship.

It was a female of the earthly species. She collapsed in a heap on the base of the focal area, her wrenched legs and lacerated feet unable to support her weight. Raising herself on one bruised, bloody hand, she lifted the other high and cried, "Praise God! Praise to Thy name, O Lord! Thou hast delivered Thy servant from the wrath of the enemy!"

She attempted to rise but could not. She began to recount her sufferings and told of torments inflicted on her and others for reasons the Anpreene Conceptualizers had difficulty assimilating. Her speech grew wild and incoherent. They let her rant on, uninterrupted, until she slumped forward and was silent.

"The creature believes that she is in the presence of a superior being from her racial myth," the Conceptualizers transmitted. "This myth appears to hold great significance for these creatures. We suggest immediate action in accordance with her belief."

In a gentle, melodious human voice, the Empath asked, "Why hast thou suffered so, my daughter?"

She raised her head and gazed upon the towering white-clad figure of the Anpreene, shining with a subdued golden aura. "I would not deny Thee! Not even on the rack would I deny my God and Savior and His one true faith, and Thou hast plucked me from the flames!"

The Empath searched deep in her tortured mind for the proper terms in which to couch its response. It stretched forth a pale hand in a gesture of benediction. "My child, the cup cannot pass. This is but a foretaste of the joy that awaits when thou hast passed through the flame. Be steadfast," the Empath said.

A look of fear came into the hollow, haunted eyes, and then the woman said, "Thou art just in all things, Lord. Thy will be done."

The selector hummed once again, and the woman vanished, returning to her pyre within a nanosecond of her departure. Her scream as the flames rose around her was drowned out by the rumble of the fire and the cries of the crowd.

From that time and place, the selector took a total of twenty-eight specimens, snatching each one from the instant before death—when the blade was at the nape or the knot was just about to close on the

throat or the rising smoke and flame brought an end to long agony. The selector could not erase memories, but it could take specimens who would never have the opportunity to speak those memories to others of their species.

All those from that period reacted in a similar manner. When the selector had hurled the last one back to his destined end on the block, the Anpreene returned their ship and all aboard it to normal time and space and turned to the next stage of their exacting duties.

For the Empath alone, there was no task awaiting. The Empath was released at once to enter the trancelike state, called *pentrecane* by the Anpreene, which restored body and mind after close communion with an alien identity. Deprived of *pentrecane*, an Empath would be overwhelmed by the sheer vital force of an intruding presence; the alien manner and thinking process would be ineradicable.

While the Empath restored its mental and

● *The Assessors
communed; the Empath and
the Conceptual-
izers prepared themselves
for the next
contact; the earth spun
through more
years. The ship moved. . . .* ●

physical integrity, the others aboard the Anpreene vessel were busy. Conceptualizers structured and collated their findings; Assessors evaluated them; and all the while the selector replenished its power for the next gathering of specimens.

After long deliberation, the Assessors concluded that the physical heterogeneity of this race had directly and drastically influenced its social development. Unlike the Anpreene, who were a single people with a single purpose, these creatures were fragmented to the point of chaos. Their differences appeared to be deep-seated and the cause of great cruelty. It remained to be determined whether this fragmentation was a phase on the race's way to civilization or a racial characteristic inherent in all.

The Assessors communed; the Empath and the Conceptualizers prepared themselves for the next contact. The earth spun through more years; the ship moved to another part of the planet; and the instruments began their search once more.

This time the first specimen was a male. He blinked, looked hard at the Empath, then smiled sardonically. "So. A clever trick, I admit, whisking me here just as I expect to

die," he said in a tongue quite different from that of the first group. "Tell me, where are the rest of the tribunal? Where are the fat priests and the nobles who dine on the people's flesh? Are they hiding somewhere, cowering in fear of the words of a condemned man?"

He looked at the featureless walls, then shook a fist and cried in a thundering voice, "Well may you hide from my words, you butchers! But seek where you will, no place will give you refuge. You will kill me, but my words will live and rouse the people to action. We will burn your churches, burn your châteaux, burn your tax rolls, and feed the flame with your bloated guts. Oh, yes, my lords and masters, the people will rise. They've long been patient, but their patience is coming to an end. Does my lady wish a new pendant to grace her white bosom? Squeeze the blood from a thousand peasants, and she shall have her bauble. Does my lord desire a new team for his carriage? Take the food from a thousand hungry children, and give my lord his horses. Or perhaps my lord the archbishop . . ."

He spoke on, in a torrent of words and angry gestures, while the Conceptualizers fitted his speech into the cultural patterns the ship's instruments had gathered and the Empath probed his mind for a framework in which to structure communication when the Conceptualizers advised it. But the Conceptualizers concluded, "This creature believes his function is the repeated and forceful expression of a fixed belief-structure. Productive communication extremely unlikely. We recommend no exchange."

When the specimen had completed his speech, he was returned whence he had come. The second specimen said much the same as the first, but the third said the exact opposite of the first two, though he used many of the same terms and concepts. In all, the selector took nineteen specimens from this period, and the Assessors found them to represent eleven distinct and irreconcilable views of the social reality.

Deliberation on these specimens resulted in a strong reaffirmation of the original conclusion and created much confusion among the Assessors. A race so utterly disunited as to border on total individualism was all but unimaginable to the Anpreene. Such a race might be spoken of in theory, but in existence it could not long survive. Survival requires unity, and unity ensures survival: This was the basic law of the Anpreene Domination, the fundamental principle governing the lives and thoughts of twelve planets and sixteen colonies, and it was beyond question.

And yet this race not only survived its fragmentation but appeared to thrive on it. During the interval—brief by Anpreene standards—in which the Acquisitors were gathering information and the Zetetics were organizing it for the next mission of the

Conceptualizers and the Empath, the population of the planet increased twentyfold. Their technology advanced to the level of powered transportation and atmospheric flight.

On the advice of the Zetetics, specimens from this period were gathered not from a single locus but from a variety of sites on the planet. And, as a cautionary measure, the Anpreene ship was moved to a higher, safer orbit.

The first specimen was a woman, dressed in layers of worn and dirty clothing. She fell to the base of the focal area but quickly clambered erect and looked about wildly until her eyes fell upon the Empath.

"Who the hell are you? Where is this place? What happened to the tank?" she demanded. Her language was utterly unlike all the others'.

The Empath probed for a proper response. "You will be returned soon enough, comrade. All we ask of you is a few minutes of intelligent talk."

She spat. "Talk, hell! Get me back so I can stop that tank."

"You will stop the tank, I promise you. But you will die."

"Do you think I don't know that?" She took a step toward the Empath, shielded her eyes from the surrounding light, and studied the white-robed figure closely. "What are you, anyway? Some kind of priest? No, a priest wouldn't call me comrade. Well, you can keep your comrade, too. I'm not dying for the party any more than I'm dying for God."

"Why are you dying, then?" the Empath asked the woman.

"To blow a tankful of those bastards to hell. To let my friends escape so they can kill more of them. Satisfied? Now get me back where I belong."

"You will be returned."

"Do you think you can keep me here until I lose my nerve? I don't know who you are or how you got me here, but you won't keep me without a fight," the woman said, reaching into her ragged coat and lurching toward the Empath.

She was returned at once.

The Empath weighed what it had drawn from her and informed the Conceptualizers. "She did not believe that she was in the presence of a deity. She was willing to take Anpreene life in order to return to her companions and destroy the aggression vehicle."

"She was extracted from an extreme aggression condition. The vehicle she sought to destroy had already caused harm to those in close bond with her," the Conceptualizers explained.

"She wished to make it possible for others to live on. But she could do so only by the sacrifice of her own continued existence. She was aware of that."

The Conceptualizers made no response.

The second specimen was a young boy, slightly built, barely of the age at which this race matured. He gazed at the Empath with

a look of fearful reverence, then bowed deeply.

"What is the marked cloth binding this specimen's forehead?" the Empath asked. "I sense a significance, but its purpose is not clear to me."

The Conceptualizers explained at once. "It is symbolic, not functional. The symbolism relates to a period on which our data are incomplete, but there are indications that the wearing of this cloth proclaims one's willingness to die in battle."

"It is strange that a people so eager to die should instead thrive. What is the nature of their battle?"

"It is a conflict of machines guided by members of this race. This specimen seeks to inflict damage on a large water-transport vehicle by hitting it with the atmospheric-flight machine in which he travels," the Conceptualizers explained.

The specimen straightened, bowed again from the waist, then fell to his knees and prostrated himself. When he began to speak, the Empath was perplexed by his revelations, although the desired response was clear at the first brush with the boy's consciousness.

"Like the true Divine Wind, you fall upon the vessel of the enemy and destroy it utterly. You have blossomed into a flower of death to bring honor upon your Emperor and your family. You will be forever numbered among the samurai," the Empath said in the boy's language. Even as it ut-

tered the words, the Empath felt a sense of peace, fulfillment, and happiness deep within the boy.

"The boy believed that an Empath was something that at once partook of both divinity and the boy's own nature," reported the Empath when the youth was gone. "This race seems to have as many divinity myths as it has individuals."

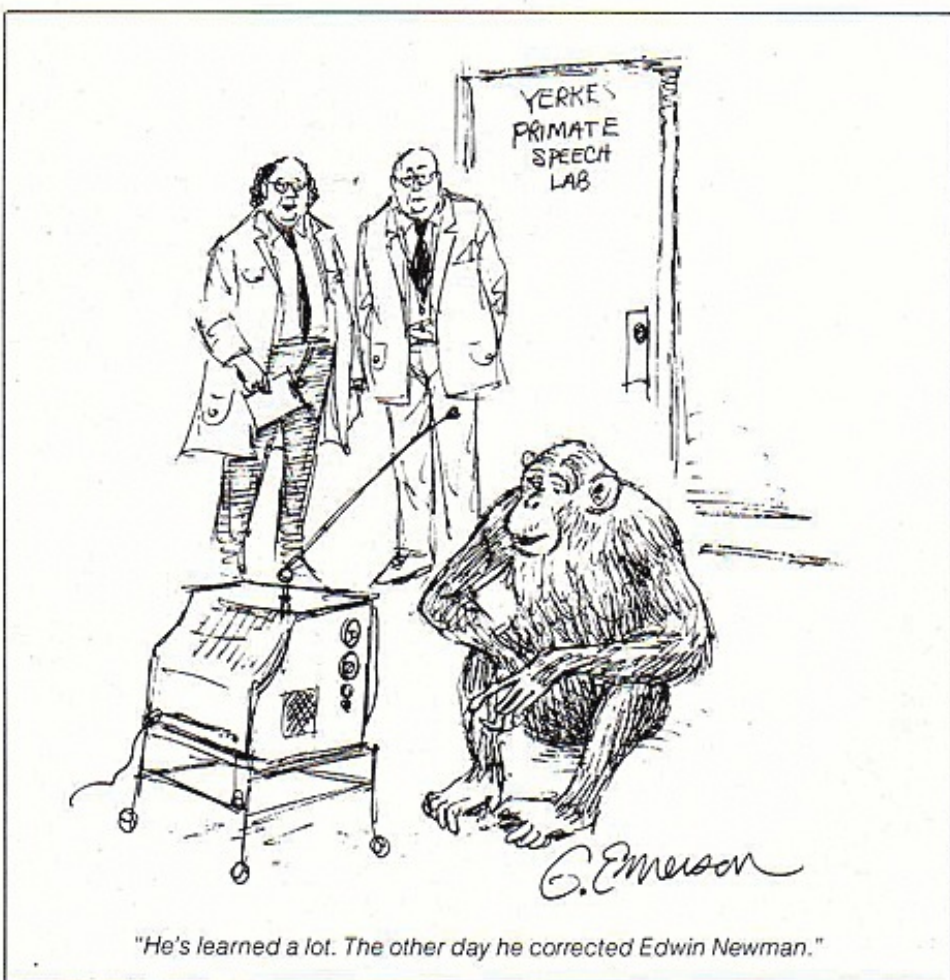
"Perhaps a stage in development. The specimens of the second taking strongly denied divinities and related myths," the Conceptualizers pointed out. "They appeared to worship an abstract communal concept of selective application."

"But that is irrational, considered in relation to the beliefs of those we've probed in the first taking."

"The irrational appears to be not merely tolerated but highly valued among this race, and its acceptance increases as the race grows," the Conceptualizers informed the Empath. "The battle in which these specimens are engaged is almost planet-wide. It appears to us that they have carefully divided the planet into imaginary units, and groupings of these units are systematically endeavoring to destroy one another."

"Is there unity within each grouping? Have they progressed to at least that level?"

"They have not. The groupings are temporary. Within the groupings, and within the units, are strong indicators of latent fragmentation leading to repetitions of this conflict among reorganized groupings. The



race appears to be self-destructive," concluded the Conceptualizers.

The Empath paused and reflected, *Yet they go on.*

Further specimens from this taking revealed little. They were fatigued, or their minds were warped with hatred or befuddled with horror, and the Empath was pained by contact with them.

The last specimen from this period was drawn from a crowded place behind the battle lines. He was naked, and the bones showed through his dry, taut skin. His head was shaven, his dark eyes sunk deep into a skull-like face. He stood motionless in the focal area, blinking those hollowed eyes, and when the Empath touched him, there was nothing within except numb, hopeless resignation.

Then the eyes focused. The blinking stopped. The specimen looked directly at the Empath, robed in white, seated above him, and the Empath gasped and turned aside, shaken. The specimen vanished immediately.

"He believed I was his deity," the Empath murmured. "And he hated me!"

No more specimens were taken from that period. The Empath, exhausted by the contacts of this taking, the largest of all, went at once to sink deeply into *pentrecane*. The Assessors labored mightily to evaluate the findings and saw in their work a tangle of paradoxes. These creatures were isolates;

yet they could form collectivities and feel loyal to them to the point of death, even though the collectivity was temporary and arbitrary. That was madness. They believed in things imperceptible to the senses and extraintellectual, and believed with an intensity that endured great suffering and accepted a horrible death. Yet they could suffer such pains and repudiate the very myth that justified them. That was madness. They fought one another, with every weapon of mind and body, and all that their developing sciences could provide, and they used those same powers of mind and body and science to preserve and enhance life. Madness. They were irrational. Atmosphere, genetic history, some malign radiation... something had made this race of beings absolutely mad, the Assessors concluded.

This conclusion was not altogether discouraging. It was clear by now that the race of Earth was sure to destroy itself in a very short time. There would thus be no need for an Anpreene contact and no risk of having to bring Anpreene military power to bear against these little creatures. For all their ferocity, they could not withstand the unified might of the Anpreene Domination. They would resist, and it would be necessary to destroy them. And the destruction of even such a race as this would leave a scar upon the Anpreene memory. Far better to let them bring about their own inevitable downfall.

During these deliberations, the population of the world below them had doubled and redoubled. The satellite and nearby planets had been visited.

The Anpreene ship withdrew to a safe distance, beyond the orbit of the satellite, and began preparations for a fourth and final sampling. In the opinion of the Assessors, a fifth sampling would be impossible; the race would be extinct.

The final sampling consisted of a single specimen, a male, plucked from an enormous craft constructed in orbit above the planet. It was one of three such craft, and all indications were that it would be destroyed by an internal malfunction as it reached the rim of the solar system. The selector focused, hummed to life, and reached out for the gray-haired man who stood on the operations bridge of the great orbiting ship.

His subdued reaction surprised the Anpreene.

He glanced about the focal area and seemed to comprehend the situation at once. Folding his arms, smiling, he said to the Empath, "So, you're out here after all. We weren't mistaken."

"Address this specimen in friendly terms, as an equal," the Conceptualizers instructed.

"We come in peace and friendship. We are the Anpreene, and we are your friends," said the Empath.

"You even speak my language. Quite well, too. Telepathy, or have you been studying us from up here? Or perhaps you've been living among us?"

"A portion of the Anpreene are Empaths, with a power akin to what you would call telepathy. It cannot be explained further in terms you would comprehend. We have been studying you since... since your year 1560."

The man from the Earth ship made a low, whistling sound and shook his head slowly. "You must have seen some incredible things," he said. "Tell me, what have you learned about us?"

"Relate our conclusions," the Conceptualizers ordered.

"Your race is irrational."

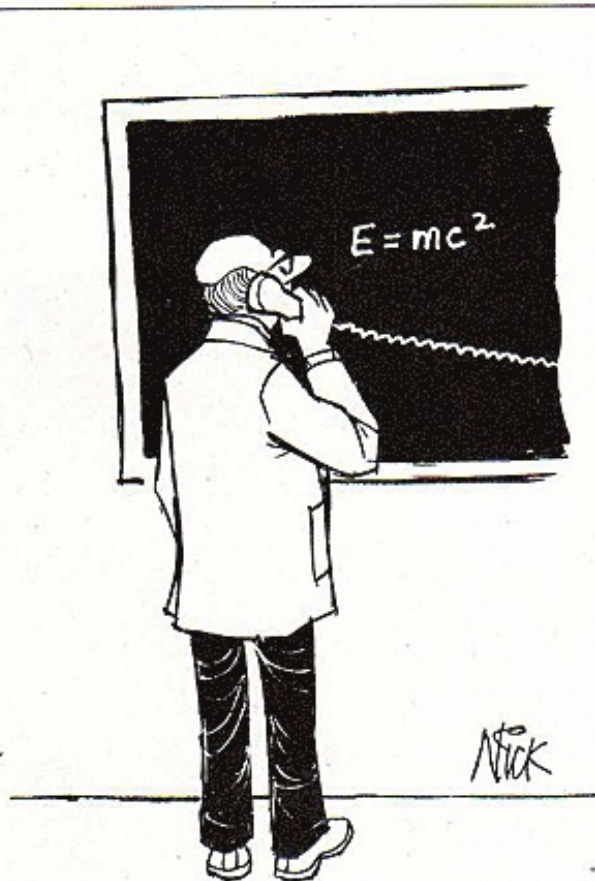
The man seemed startled, then amused. He looked directly at the Empath and said, "If it took you five hundred years to see that, you certainly aren't a race that jumps to conclusions. We've all known about that for a long time."

The Empath struggled with the man's reactions. This one was not like the others. Words were seldom a clear reflection of inner states in any case, but with this particular man, words and inner states seemed to be self-contradictory on almost every level.

"I do not understand your reaction," the Empath admitted.

"Did you expect me to be terrified? To attack you? To beg and scream for your mercy?"

"None of those things. You are not given



"Yes, I've got that. Edith wants me to pick up two pounds of mozzarella cheese."

to such reactions. What is puzzling is your immediate understanding and acceptance of the situation. It is unlike the reactions of the other specimens."

The man nodded and said, "I suppose that's true. The others must have thought you were a god. Or a demon."

"That is accurate."

"Well, I don't consider you either, and I'm glad to see you. In fact, I was hoping to find you, or someone like you."

"Explain."

"Those ships—the one I was on, and the two others—are going out to look for other worlds like Earth and other intelligent races. And before I've even left the solar system, you've proved to me that my mission can succeed. Of course I accept the situation. I rejoice in it!"

"Have you no fear that an intelligent alien race might constitute a danger to your own race?" the Empath asked.

"There's always that possibility. I'm sure it's occurred to every people that ever looked up at the stars." He hesitated, looked carefully at the Empath, then went on. "Still, you've been here for five centuries and haven't attacked us or interfered with us in any way we've been aware of. You aren't too different from us in appearance, and you can speak our languages. These are encouraging signs. Apparently you're a much longer-lived race than we are, probably with a totally different time orientation and value system. A very rational people, too: thoroughgoing, cautious in judgment, farsighted. I don't know why you're here, but I see no evidence of outward hostility. What is the nature of your mission?"

"Tell him all," instructed the Conceptualizers.

"Our mission is like yours," said the Empath. "We seek new worlds for the Anpreene Domination. Yours is the most suitable we have discovered."

"Do you intend to try to take it?"

"Our Assessors judge that aggressive action will not be necessary. Your race will soon destroy itself. According to Anpreene calculations, your destruction is long overdue."

"Some earthly calculations give the same result. And yet we've managed to hang on. We may surprise you."

"The Anpreene would prefer to avoid conflict with such a race as yours."

"I'm not a spokesman for my race, but I think it's safe to say that we'd rather be your friends than your enemies. I hope we can be. But tell me, Empath, what do you plan to do with me now?"

"You will be returned to your ship and to normal time and space. Your absence will not have been noticed. A faulty coolant valve will cause the ship to explode in seven to eighteen seconds after your return."

"The main valve on C deck, the one just aft of the food processors?" the gray-haired man asked.

The Empath conferred with the Concep-

tualizers and then said yes.

"Is this your doing?" the man asked cautiously.

"No. It is a predicted malfunction."

The man was silent for a moment. Then he looked up, past the Empath, and asked, "Will the others make it?"

"All indications are that they will survive."

"Then I suppose it's worthwhile."

"Again your attitude is confusing," the Empath admitted. "Your race seems fond of life, and yet it accepts death willingly. You are dying not in some struggle based on a belief, as your race often does, but in a mere mechanical malfunction. Yet you seem undisturbed."

"My race doesn't like dying quite as much as you think. But we can accept death if it has a purpose."

"What is the purpose of your death?" the Empath asked.

"I've helped to bring my people to the stars. Even if I don't make it, others most certainly will."

When the man had been returned to his ship, the Assessors declared the proximate phase of the mission complete and ordered preparations for the long homeward voyage. The Empath and the Conceptualizers, their hardest work done, started wearily for their respective living compartments.

The Empath felt drained of vitality. It had been trained from youth to assimilate the

life patterns of alien races and had done so on several earlier expeditions, but never with a race so frenzied and spasmodic in its ways. Attuning to the human race had been an exhausting duty. Even *pentrecane* had been scarcely enough to sustain wholeness.

"An interesting race," the Conceptualizers observed. "But mad. Their frenzy is the working out of their madness."

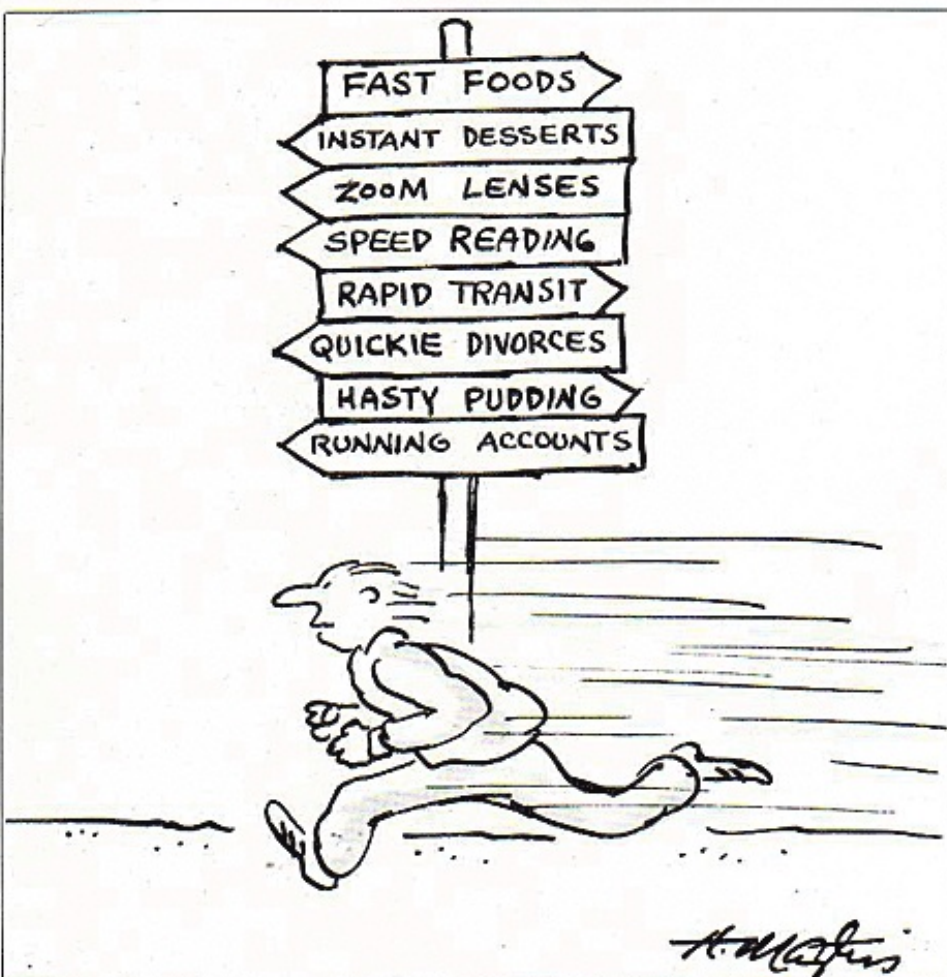
"I found much good in them," the Empath responded.

"Observe the discipline of the Empath. Do not overlook the fact that these creatures are inferiors and potential enemies. Also, that they are mad."

The Empath, still steeped in human attitudes and reactions, made no immediate response. After a time, in inner communication, which in weariness was left unguarded, open to the Conceptualizers, the Empath reflected, Yes, they are mad. But there is splendor in such madness.

The Anpreene left the solar system in something more of a hurry than was their custom. The journey home was uneventful. The Empath spent the entire trip in deep *pentrecane* and arrived fully restored and revitalized. This proved to be fortunate, for much unexpected work lay ahead for the Empath.

When the Anpreene ship returned to normal space within the Domination, the armada from Earth was waiting peacefully to greet it. ☐





THE THOUSAND CUTS

BY IAN WATSON

The *Petrushka* restaurant was a large dim cellar, with theirs the only table occupied. Ballet Russe murals writhed dimly on the walls; exotic ghosts.

As the waiter unloaded the chilled glasses of Vodka, Don Kavanagh observed, "I don't think Russian restaurants are very popular these days."

"That's why we came," Hugh Carpenter said. "Bound to get a table."

"Don't blame me," said the waiter. "I'm a Londoner, born and bred."

"Maybe there's a good sketch there," suggested Martha Vine, who was the ugly sister of the team. "You know, restaurants run by the wrong sort of people. Such as an Eskimo Curry House . . . Or, wait a minute, how about a slaughterhouse for vegetables? Wait, I've got it, protests at vegetable vivisection!"

Hugh dismissed the notion, and the waiter, with the same toss of his head. The whole sparkle of their TV show relied on cultivating a blind spot for the obvious.

"Not quite mad enough, darling." He cocked his head. "What's that?"

Don listened.

"A car backfiring."

"That many times?"

"More like gunfire," said Alison Samuels, shaking her impeccably corn-rowed red hair. She was beauty, to Martha's beast.

"So it's somebody gunning their engine." Hugh grinned triumphantly. "Okay, where were we?"

Soon after, sounds of crashing and breakages, a woman's scream and incoherent shouting came from the upstairs vestibule of the *Petrushka* . . .

"This isn't one of your practical jokes, is it, Hugh?" asked Martha anxiously. "Tape recorder upstairs? Is it?"

"No, it damn well . . ."

At that moment two brawny men wearing lumber jackets crowded down the stairs, thrusting the waiter, who was bleeding from the mouth, and the manager and his beige-blond receptionist ahead of them. A third man stayed up top. All three were armed with machine guns.

"Stay where you are!" The armed man's accent was southern Irish. "You three, get to a table and sit down!"

The manager, cashier and waiter did so, quickly.

The momentary silence that followed was broken by the approaching wail of a police siren.

"I take it," said Hugh loudly, "that we are all hostages in yet another bungled terrorist escapade?"

"Be quiet!"

Out of the corner of his mouth, Don murmured, "Hush. You're most likely to get murdered in the first few minutes. Then rapport starts building up. Just . . . meditate. Do nothing."

"Zen and the art of being a hostage, eh?" Hugh whispered. He sat still as a Buddhist monk.

PAINTING BY WILSON McCLEAN

A police loudspeaker spoke, close by...

"Don't come any nearer!" cried the upstairs man. "We have hostages in here! We'll kill them!"

Lumber jacket number two ran to the kitchen door and kicked it open...

Hugh's tongue moved inside her mouth. His finger traced the curve of her hip.

He pulled away instantly. He was naked. So was Alison. They were on the bed in his Chelsea flat. Outside was bright with June sunlight.

Alison gazed at Hugh, wide-eyed.

"But," she managed to say.

"But we're in the *Petrushka*, Alison... I mean, correct me if I'm crazy, but I wasn't aware that I'm subject to bouts of amnesia! I mean... how the hell did we get here? I mean, you can tell me, can't you?"

"Hugh, I... I can't tell you anything. We're in the restaurant. Those IRA men are... at least... I suppose that's what they were. But we aren't. We're here."

Hugh sat up. Dumbly he stared at a newspaper lying on the yellow shag-piled carpet.

The headlines were: PETRUSHKA SIEGE ENDS PEACEFULLY.

He read the story, hardly understanding it. But he understood the accompanying photograph of himself with his arm wrapped round Alison's shoulders, both of them grinning and waving.

"Just look at the date! June the *ninth*. This is next week's newspaper."

"So we're in the middle of next week." Alison began to laugh hysterically, then with deliberate irony she slapped her own cheek. "I must remember this trick next time I visit the dentist's... Why can't either of us remember a bloody thing?"

"I wish I could remember us making love."

Alison started to dress.

"I always wanted us to get into bed," Hugh went on. "It was one of my big ambitions. I suppose it still is! We must have been celebrating our freedom. Our release..."

"Gas," he decided suddenly. "That's it. They must have used some new kind of psychochemical to knock everybody unconscious or confuse us. This is a side effect."

He studied the newspaper more carefully.

"Doesn't say a thing about gas. It says the police talked the gunmen out. I suppose you can muzzle the press a little... no, this was all too public. The story has to be true as written."

His telephone rang.

Hugh hurried naked into the next room to take the call.

Alison was sitting at the dressing table, concentrating on braiding her hair, when he returned. He noticed how she was trembling. His own body felt hollow and his skin was covered with goose bumps, though the air was warm.

"That was Don. He... he reacted very rationally, for a clown. He's in the same fix we are. After Don hung up, I tried to phone Martha. But I can't get through. All the lines are jammed. I tried to phone the police. I even tried to call... I tried to call the god-damn talking clock. Can't get it either. Everybody is phoning to find out what the bloody time is! It isn't just us, Alison. It's got nothing specifically to do with the *Petrushka*. It's everybody."

"Where's your radio? Switch it on."

"Kitchen."

Hugh fled, still naked, and she followed his bouncing rump.

A punk rock band was singing:

... they'll bomb yer boobs!
they'll bomb yer brains!
they'll bomb yer burns!

The song faded.

The deejay said, "You've just heard the latest track from The Weasels. Hot stuff."

• "What if reality itself is really
a sort of film?...
Suppose the world is being
projected. It's a
solid movie made of matter,
not of light. We're
an entry in the Film Festival
of the Universe." •

eh? Like, *radio*-active... and that's what a radio's supposed to be: active. So I'm carrying straight on, even if you're all as confused as I am. That's right, loyal listeners, none of us here in the studio has any idea how we got here today. Or how it got to be today. But if you're all feeling the way I'm feeling, I've got this word of advice for you: stay cool, and carry on doing what you're doing. Keep on trucking that truck. Keep the traffic moving. Cook the lunch, Ma Jones, and don't set fire to the pan—the kids'll be soon home. And now to help you all, here comes a track from an old group, Traffic. It's called, *In a Chinese Noodle Factory*...

Hugh tuned across the dial. One station had simply gone off the air; on others only music was being broadcast.

"Try short-wave," urged Alison. "Abroad."

When he picked up a gabbled French-language broadcast from Cairo, he realized that whatever had happened, had maybe happened world-wide.

Before the end of June, and during July and August, the effect repeated itself a dozen times. None of the subsequent

"breaks" lasted as long as the first one had. Some swallowed up two or three days, and others only a few hours. But there was no sign that they were winding down.

Nor was there any conceivable explanation.

Nor could people get used to having their lives repeatedly broken at random.

For this was not simply like fainting or falling asleep. When awareness resumed—and who could promise that it would, next time?—all the world's activities were found to have flowed on as usual. Airplanes had jetted to and fro between London and New York. Contracts had been signed, and babies born. Newspapers had been printed—and the newsdealers' cry of "Read all about it!" was now an imperative, for how else could anyone find out in detail what had happened? A woman would find herself locked in a jail cell, but the police would have to consult their records before they could break the news to her that she had murdered, say, her husband—which raised strange new questions about guilt and innocence...

Distressing it was indeed, to find oneself suddenly at the controls of a jumbo jet heading in to land at an unexpected airport, or lying in a hospital bed after a mysterious operation, or running down a street... for what reason?

"What if we find ourselves in the middle of a nuclear war, with all the sirens wailing?" asked Martha. "I can't stand it. It's driving me mad." She poured herself another glass of gin.

"It's driving everybody mad," said Don. They were in Hugh's flat. "It's like that old Chinese torture..."

"Which, the water dripping down on your skull till it wears a hole in it?"

"No, I mean the Death of a Thousand Cuts. I always wondered if the poor victims died from loss of blood. But it must have been from the accumulated shock. One painful shock after another. One, you could survive. A dozen, you could survive. But a thousand? Never! That's what'll destroy the human race. This is the Life of a Thousand Cuts."

"Good heavens," said Hugh, "you've got it." He rubbed his hands briskly. "Cuts! That's brilliant."

"It means we're like robots," Don went on, ignoring him. "We don't need consciousness. We don't need to be aware. A bird isn't aware. But that doesn't stop it from courting and raising young and migrating. Actually, it helps. No swallow with self-awareness would bother flying all the way to the tip of South Africa and back every year."

"Do you mean we've evolved too much self-awareness, and it's a dead end?" asked Alison.

"And now we're going to become robots again, and the world will run a lot more smoothly. But we won't know it. Any more than a sparrow or a mouse knows. They just are. Martha, you mentioned nuclear war."

But have you realized how smoothly the Arms Limitation Talks are going all of a sudden?"

"That's because both sides are more scared of an accident than they've ever been."

"No, it isn't. I've been checking back. All the significant advances have occurred during breaks." Don chuckled softly. "Breakthroughs, during breaks! And remember, too, that the *Petrushka* siege ended peacefully—during a break."

"During a cut," Hugh corrected him.

"The *Petrushka* thing could so easily have ended in a bloody shoot-out, with the restaurant being stormed. But it didn't happen that way. . . ."

Don was driving his red Metro along the elevated section of the motorway into Central London, in fast heavy traffic. Some distance behind, a Volkswagen failed to overtake a large tractor-trailer. The tractor-trailer rammed it, skidding and jackknifing. As following traffic slammed into the wreckage, a ball of flame rose up.

"Bloody hell!" Don glanced at the calendar watch he had thought to equip himself with in the aftermath of the first break, before stocks ran out. "Two days, this time."

Alison was sitting next to him. Hugh was in the back seat. No sign of Martha. He hoped she was still alive.

"For Christ's sake, get us off here!" begged Alison. "It's a death trap."

"More like a bloody buffalo stampede! Why don't the idiots slow down?"

Somehow, Don reached the next exit ramp safely. The ramp was crowded with vehicles descending. Horns blared. Fenders and bumpers scraped and banged.

"Mustn't forget what we were talking about," Hugh reminded him, over his shoulder. "The Life of a Thousand Cuts."

"There'll be a thousand cuts in the paintwork of this baby. . . ."

"Stop at the nearest pub, Don. We have to talk before we lose the continuity."

"About cuts," said Hugh, cradling a double scotch.

The bar of the *Duke of Kent* was packed, but remarkably hushed as people waited for the filler music on the landlord's radio to stop, and the first hastily assembled news to take its place. Many people were not drinking at all, but merely waiting.

"You mentioned the Death of a Thousand Cuts, and of course, those were cuts in the flesh with a knife. But what do we mean by cuts?"

"A film," said Alison. "Editing. Switching scenes."

"Good girl!"

"I'm not a girl. Girls are twelve years old or less."

"Okay, sorry."

"That's why I wouldn't ever go to bed with you."

"Okay, okay. I prostrate myself. Now, that's it exactly, the editing of a film—the cutting from one scene to the next. You don't need to see your characters drive all

the way from A to B. They just leave, then they arrive. Otherwise a film would last as long as real life. Or the director would be Andy Warhol."

"As long as real life used to last. . . ."

"Quite. And what if reality itself is really a sort of film? A millennia-long Warhol movie with a cast of billions? Suppose, as holography is to flat photography, so-to-holography is . . . solidography. Suppose the world is being projected. It's a solid movie made of matter, not of light. We're an entry in the Film Festival of the Universe. But. . . ." He paused emphatically.

"... Are we the completed masterpiece? Or are we the rushes on the cutting room floor. . . of reality? Because suddenly we've lost our own sense of continuity. Two days drop out. Three days drop out."

The music on the radio stopped.

"Shush!" hissed a roomful of snakes.

"This is the BBC Emergency Service, and I am Robin Johnson. The date is September the first. The time is one-twenty-five in the afternoon. The most recent break measured approximately fifty hours. At the Helsinki disarmament talks, preliminary agreement has been reached on the reduction of. . . ."

"Come on, we can read all that stuff later."

Don had not yet started the engine of the Metro. "Wouldn't it spoil the natural flow of this film of yours if all the characters suddenly became aware that their lives are just

a fiction?" he asked. "Maybe this is a very subtle, artistic touch. Maybe the director has suddenly gone into experimental cinema. He was making a realistic film before. But now he's into New Wave techniques—meta-film—like a French director. I still say we're all really living robots. But we never knew it before. Now we do." Don concluded.

"But that isn't a decline of awareness," Alison pointed out. "That's an increase in awareness."

"It's a bloody decline in our sense of control over what happens in the world. The important things are all happening off-stage. They're happening off everybody's stage. Look at this progress in arms control. . . you heard Robin on the news."

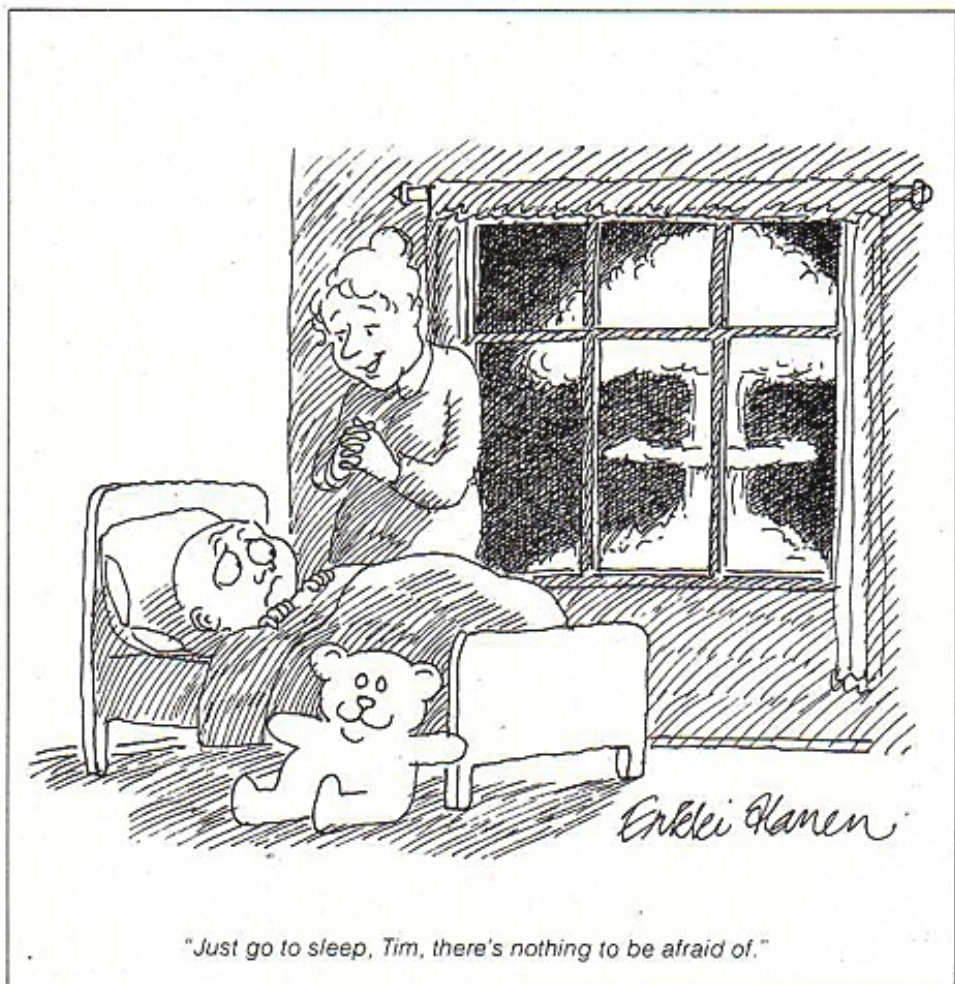
"Maybe," said Alison. "God has decided to cut reality, and re-edit it. Because it wasn't working out. Or it didn't work out the first time. It bombed out, literally. We're in a remake of the film of the world."

Hugh teased her, saying, "Maybe these breaks are for advertisements. Only, we can't see them any more than the characters in a film can see the commercials!"

"Rubbish. When you have a commercial," said Alison, "the film just stops. Then it starts up again from the same moment."

"In that case, you're right. Something must be editing reality," Hugh acknowledged.

"How can I possibly agree with that? But I can't disagree, either. Lord knows, reality



"Just go to sleep, Tim, there's nothing to be afraid of."

needs editing."

An ambulance wailed by, bearing someone from the motorway pile-up. A police car raced the other way, blue light flashing on its roof.

"It's the Thousand Cuts," said Don. "And it'll drive us mad with stress. Like rats in an electrified maze. We'll go catatonic. We'll become a planet of zombies—a world on autopilot. Like the birds and the bees."

He started the engine. Driving out of the car park of the *Duke of Kent*, he turned left because it was easier to do so, before remembering that he had no idea where they had been heading. He slowed, to let another ambulance race by.

Hugh suddenly began to laugh.

"I've just got it! Don't you see, we've got a way to test my idea. We may even have a way to communicate with the director himself! Listen, we'll do a special show. We'll do a show about editing reality. We'll make a film within The Film—a film about that Film. I'll package this as a great morale-booster, which indeed it might well be! We'll get the whole country laughing at what's happening. It'll help keep people sane during the Thousand Cuts."

Alison clapped her hands.

"Thank you."

"Just so long as we aren't cut off," said Don. "You know, 'Normal transmission resumes as soon as the show is over.'"

"If we are cut off, we'll still be going full steam ahead. We can watch it all on vid-

eotape afterward ... Swing us around, Don. We're going back to my flat to get the whole thing set up. And we'll need to get hold of Martha. If somebody's editing reality, I'm joining in. We'll call the show 'The Making of Reality, the Motion Picture!'"

"Don't you mean 'Remaking'?"

"Yes, I do. Quite right, love. 'The Remaking of Reality, the Motion Picture'—that's it. I stand corrected." He slouched back in the seat of the Metro.

"So do we all, Hugh, if you're right. So do we all."

"Do what?"

"Stand corrected...."

Two weeks later, Hugh cradled a phone and turned to his friends.

"Well, I don't know exactly what I've been doing the past four days. But I must have been busting my ass, as our American friends so colorfully put it. Our show's been given the green light for October the fourth, right after the nine o'clock news. Seven European countries are hooking up, using subtitles—and two major networks in the States are running us the same evening, with Australia and Japan following suit the next day. Even Russia is going to screen the show—subject, that is, to content analysis."

Martha sneezed. She had caught a cold. "Shouldn't be a problem," she sniffled. "Soviets have always laughed at God."

"Okay, so where were we, Don?" asked

Alison.

"I've been going through this heap of notes. I'll get them knocked into shape with Martha, then we can start rehearsing on videotape. Thursday. See what runs, and what doesn't run."

"Could we please switch the radio on for a moment?" asked Alison.

"Why? Oh, to check out what's been happening in the," and Hugh grinned broadly. "real world? Why not? We might harvest some more ideas."

Fetching the radio, she set it on the bar.

"... Helsinki. This agreement represents a major advance in the lessening of international tension...."

"How on Earth can an advance lessen something?" Martha asked.

"You should meet my publisher," quipped Don.

"... first genuine reduction in weapons systems, with inspection and verification by neutral observers from the Third World. The actual dismantling and downgrading of...."

"It seems even God can't manage miracles overnight," Hugh remarked.

"Blah to that," said Alison. "They're all scared of what could happen during one of the zombie intervals. Or just after one, when everyone's confused."

"... reported casualty figures following the most recent break are already in the thousands. The worst disaster occurred at Heathrow Airport, where...."

"See? It just takes one poor jerk to jab his finger at the wrong button. And poof. If this is an example of divine intervention, it's the most hamfisted miracle I've ever come across," Alison said.

"When you're cutting film, love," said Hugh, "you waste a lot of good material for the sake of the picture as a whole."

"You sound as if you sneakily admire what's going on," protested Don. "All this bloody cutting of our lives."

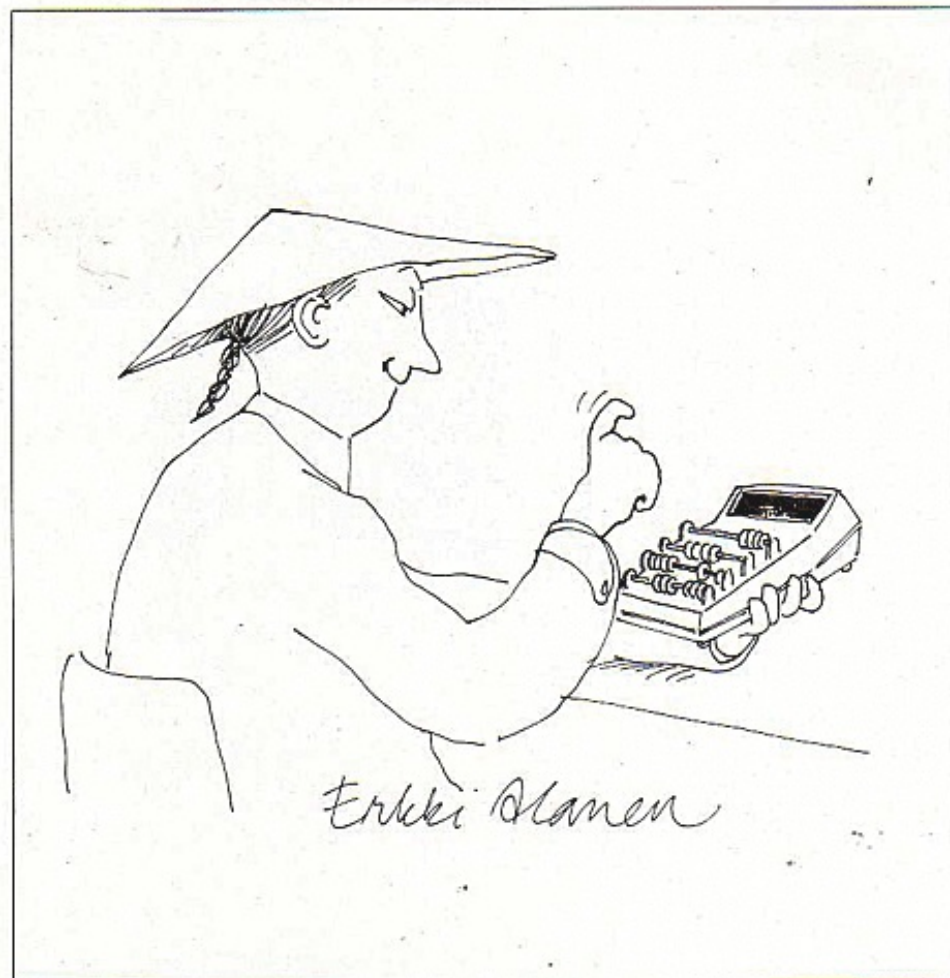
Hugh poured himself a brandy, and squirted some soda into the glass.

"No, it's ludicrous, and dangerous, and it's soul-destroying. But you've got to laugh at it, to get it in the right perspective—and yes, to keep our dignity and free will. It's a mad universe—and it's just turned out to be even madder than anybody could have imagined. Well, in my humble opinion the highest human art isn't tragedy. It's satire. And," here he nodded derisively toward the ceiling, "speaking as one trickster to another, I want whoever or whatever is directing this big show, Life, to notice that I've spotted what's going on. I've found out that reality is just a movie—and I can stay sane and even laugh."

"... have been inundated with requests for Librium and Valium...."

"I laugh, therefore I am. Birds don't laugh. Cows don't laugh. There's the difference. Now let's get on with it. Let's make everyone kill themselves laughing. They deserve it."

"The Remaking of Reality, the Motion Picture" was prerecorded during the after-



noons of October the first and second—with Hugh Carpenter in the role of Cosmic Director and the lovely Alison as his continuity-person—and it was edited into shape on the third.

It was, in the opinion of all concerned, just about the sharpest and funniest half-hour of TV in the history of the world.

Hugh turned from the video monitor to wave back to the technicians. Peter Rolfe, who had produced the show, pumped Hugh's hand and slapped him on the back, then embraced Alison and kissed her. After a moment's hesitation, he kissed Martha too. Though the show was prerecorded, the whole team had decided to be present for the transmission.

Hugh popped open one of the champagne bottles he had brought along.

"Out she flies, out she flies! To Manchester and Munich, to Tulsa and Tel Aviv! To Alpha Centauri and all points in the universe, if there's anybody out there! Cheers!"

Before long, Rolfe's telephone was flashing for his attention.

"Yes? Really? Oh superb!" he enthused. "Hugh! The switchboard is absolutely jammed. The viewers are just bubbling over. You've stopped them from throwing themselves under a bus tomorrow. You've stopped them from overdosing tonight. You've made the first real sense out of this ghastly mess. You've made the world fun again!"

"What, no negative reactions at all?" interrupted Don.

"Oh, there's a teeny little bit from the blasphemy brigade. But, my dear fellow, you can expect that."

"I do. I look forward to it. The negative reactions are so comical."

"Not this time, old son. It's heartfelt gratitude all round. The country's laughing its collective head off."

"Do you realize," asked Rolfe, as he hosted the celebration party at his Hampstead house the next evening, "this has been a new high for TV? In the last twenty-four hours, you must have clocked up viewing figures of half a billion people? Give or take the Soviets, who don't believe in ratings, mean beasts."

The carpet was strewn with telegrams. Kicking his way among them, Rolfe pressed another whiskey and water on Alison and kissed her again.

"You've probably outdone Armstrong stepping onto the Moon," he called to Hugh.

Tipsy people sprawled on the floor, watching a rerun of the show, chortling and whinnying at the high points. It was almost all high points.

"Salud!" Rolfe toasted. "The whole world must be laughing tonight. . . ."

"Damn!" swore Don. He glanced at the passing road sign. "Petworth, half a mile . . . We must be heading down to the cottage."

Hugh was hunched tensely on Don's left,

with Martha and Alison behind. Martha was wearing an orange headscarf tied tightly around her black curls—which was remarkably impromptu of her, for a weekend with friends.

The fuel gauge was showing empty, though Don always kept the tank well filled.

Slowing—and really, he had been speeding, doing nearly sixty along this country lane—he relaxed and admired the trees in the reddening sunset of their foliage.

Hugh loosened up too. "You've got to laugh, haven't you?" he asked reflectively.

And then Don looked at his watch. It wasn't the weekend at all; it was midweek.

"Good God, it's October the twentieth. That's the longest break yet. We're at Peter's place in Hampstead, on the fifth—I mean, we were. That's a cut of two whole weeks."

"I've got the radio here," said Sarah.

The filler music was Beethoven's. It played jubilantly on and on.

"There's a lot to catch up on," remarked Hugh idly.

Finally the music died away.

"... and I am Robin Johnson. The date is . . ."

"We'll be at the cottage in another ten minutes," Don said. "I've got a couple of spare gallons I keep there."

"... news will come as a grave shock to you all. Briefly, the Helsinki disarmament talks collapsed in ruins on the eleventh of

October. Yugoslavia was invaded by Warsaw Pact forces on the eighteenth, two days ago. Currently, Soviet armor is massing on the West German border. The NATO Alliance is on full alert, but so far . . . Wait! . . . I've just received an unconfirmed report that several tactical nuclear weapons have exploded inside West Germany. This report is as yet unconfirmed . . ."

"But," said Hugh lamely.

"So that's why we're all trying to get down to the cottage on an empty tank . . . We're trying to be the lucky ones."

The engine missed several times, coughed, then quietly gave out. The Metro coasted to a halt.

"It seems," said Alison quietly, "that we did kill ourselves laughing, after all."

"Do you mean," whispered Martha, "God—or something—is not mocked?"

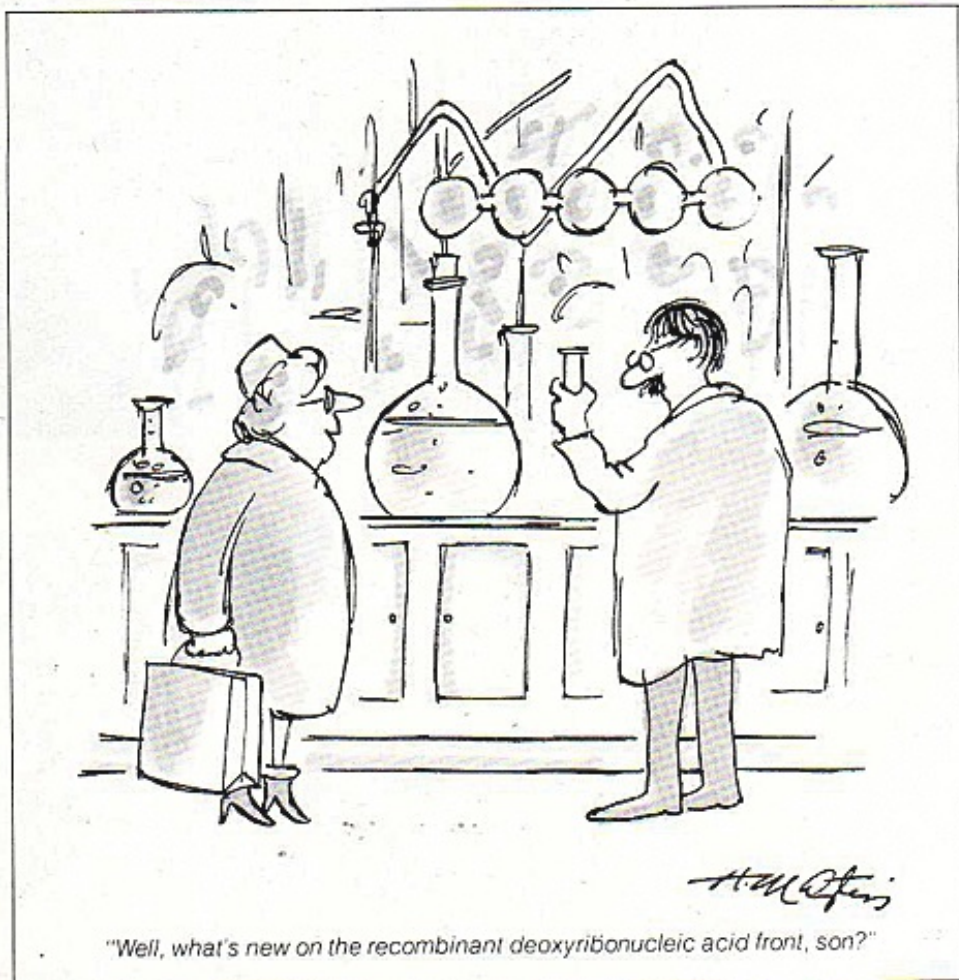
"I don't know about 'God—or something,'" said Don bitterly. "But I suppose we have to describe this as, well, a negative reaction. And somehow it doesn't seem comical. The movie's been axed."

"Post-holocaust scenes now, I presume," grumbled Hugh. "No damn sense of continuity . . ."

He wound the window down.

"Cut!" he screamed at the sky. "Cut! Cut!"

But the sky in the north brightened intolerably for a few seconds. Not long after, a fierce hot wind tore the red and gold leaves from the trees. ∞



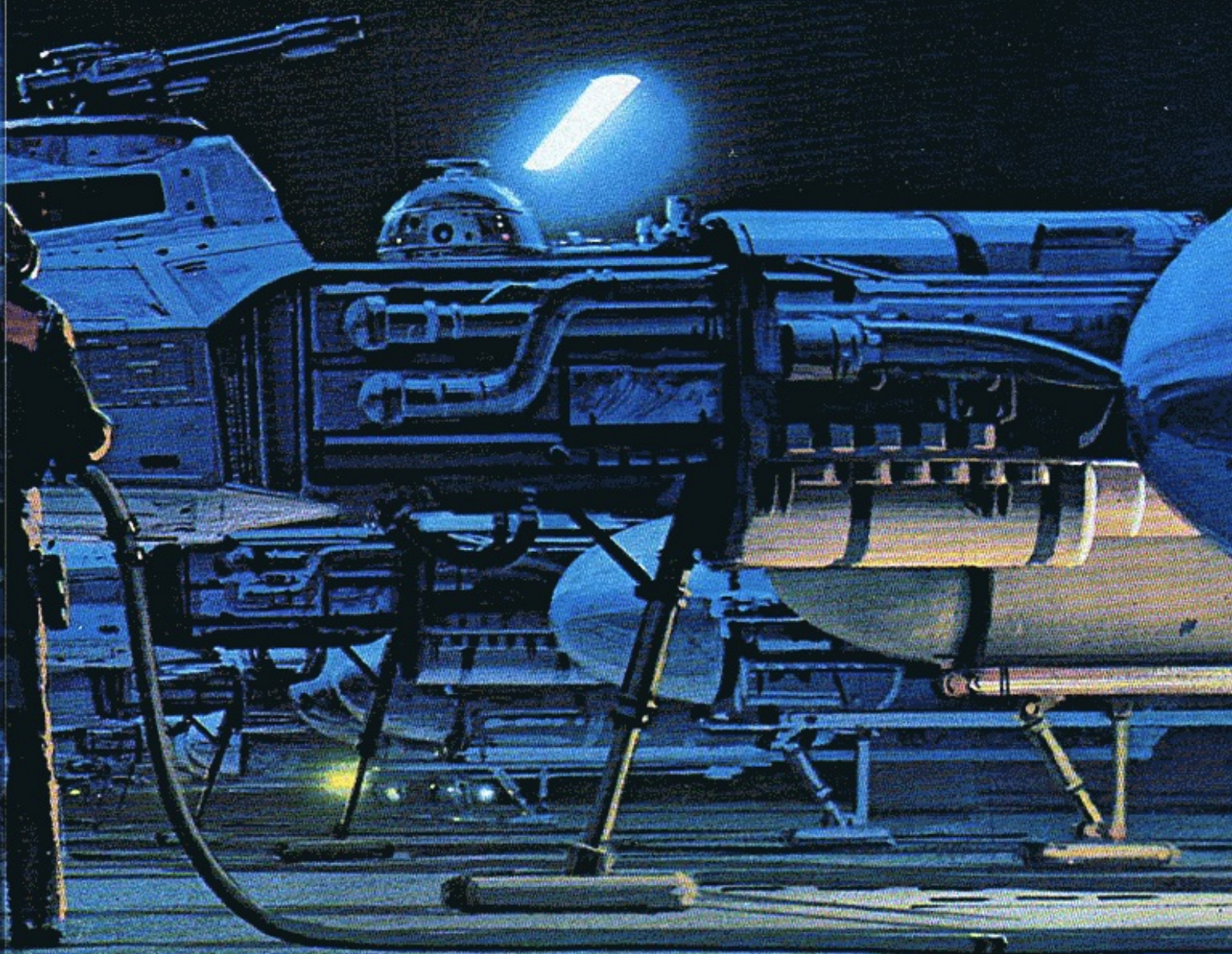


HELL CREATURES OF THE THIRD PLANET

Out of deepest space they came! Bullets couldn't stop them; fire couldn't kill them. All Earth lay at their mercy! But what did they really want?

BY STEPHEN ROBINETT

PAINTING BY R. McQUARRIE



They came out of the night sky like something out of *Close Encounters of the Third Kind*. No organ music but plenty of lights and a big mother of a mother ship. I was on duty at the time, making sure no one stole Bruce, the mechanical shark on the studio tour.

I had just locked up the set for *The Six-Million-Dollar Man* and was walking through Six Points, Texas, the Western town left over from silent days—I think I was in front of the saloon—when I saw it. At first, I thought it was the freeway spotter helicopter in trouble. There's plenty of room on the back lot for a helicopter in trouble to land. Then those lights came

on—flick—and the sky lit up like a forest of Christmas trees. I couldn't see one real star on either side, not that you can see real stars through the L.A. smog, but the point is, like I said, the mother ship was a big mother.

It stood there in midair, not making a sound. That grabbed me right away, this immense *thing* quiet as a cat on tiptoe. When my eyes and my mind started getting used to what they were looking at, I began to make out parts of the ship, metal plates, and little windows with people—or something—moving around inside, just like in *Star Wars* or *Galactica* (I get them confused) or *2001*. Okay, probably you've guessed it by now.

I'm a film buff. I'm also a cinematography student at UCLA. That's why I took the summer job as a studio night watchman, to be near the business I love and maybe learn something.

Eventually, my mind started working again, and I figured I should notify someone. After all, they were trespassing, and I was responsible for things like that. I trotted to the phone behind the facade of the marshal's office and called the police. Okay, okay, I know it was dumb. But who else was I supposed to call? The President? Maybe. They say he saw one once. Still, I admit it was a dumb thing to do. What could the police do against beings who had boldly gone where no alien had gone before, right? What could a few black-and-whites throw against a big mother of a mother ship that had crossed the infinite void of space unscathed, right? I guess I wasn't thinking. I just ran to the phone and called.

The first black-and-white showed up in about three minutes. The two kids in it got out and stared at the ship, their faces a sickly shade of green. I still don't know whether the green came from them or the lights on the ship. One of them almost broke his neck diving through the open car window to get at his radio. He screamed into the mike, saying I wasn't a nut after all and to send every unit in L.A.—in the state!

That's when we heard something for the first time, a sort of buzzing, crackling hum like the light bridge in *Flash Gordon*, followed by a scraping rumble as if a hundred-ton stone door were opening above us. I think they had a noise like it in *The Mummy*. We looked up. The bottom of the mother ship was opening.

Blinding light spilled out of the widening rectangle and lit up the entire back lot like a klieg light. A second ship, momentarily dimming the light from the belly of the mother ship, appeared in the rectangle of light and began a slow, almost imperceptible descent out of the bay. It looked like your basic flying saucer from *Invasion Earth 2150 A.D.*

Now black-and-whites were pouring into the back lot, sirens wailing, lights flashing, full of cops turning a sickly green. They slid to stops on Six Points, Texas, the set of *Thoroughly Modern Millie*, in front of the *Psycho* house, anywhere and everywhere. A black van rolled up in front of Uncle Tom's cabin, and a tac squad spilled out, just like they used to do on SWAT.

Then everyone froze.

Dead silence, except for the *Flash Gordon*-light-bridge noise. The small ship was about halfway to the ground, mechanical arms popping out, devices—who knows what they were—ominously panning back and forth on the ends of the arms.

Someone yelled, "Weapons!" and the cops opened up. They blasted it with everything they had: pistols, shotguns, automatic weapons. The SWAT team tried to lob tear gas into the open bay of the mother ship.

The canisters fell back and gassed a half-dozen policemen.

About this time, the cops figured out they were doing about as much good as Richard Carlson in the first half of *The Magnetic Monster*. Still, the mechanical arms did pop back into the saucer, and the hatches did snap shut. The saucer backed off, fast, disappearing through the hole in the mother ship. We heard the immense stone door sound, and the mother ship closed up tight, plunging the back lot into darkness. The mother ship lifted—slowly at first, then faster—and streaked off toward the Pacific in a wink.

The cops went crazy, cheering, yelling, throwing their hats in the air. One man was injured when a motorcycle helmet came down. They were all as happy as the crew of the *Enterprise* after extracting Captain Kirk from a tight spot. They figured they had won, all of them but one, Lieutenant McGraw, a pot-bellied, thirty-year veteran of the LAPD. He came over to me, flipped open the cylinder on his .38 police special, ejected the spent casings on the ground at my feet, and began reloading, stuffing each new cartridge into its chamber with grim determination. He finished loading, flipped the cylinder closed, and looked at me, saying, "They'll be back."

He was right. Six hours later, after the governor had ordered out the National Guard and the President had flown in the finest combat troops he could find (the Big Red One all the way from Fort Benning, complete with tanks and artillery support), the mother ship came back. The door in the belly rumbled open, light flooded the back lot; the saucer, its arms already out and moving, began its slow descent.

Nobody waited. The National Guard out loose with bazookas, the Big Red One with rocket launchers, the cops with handguns. A wing of F-15s from March Air Force Base thundered in and blasted both ships, mother and child. It was the most stupendous display of fire power since the battle scenes in *The Cosmic Man* or *Invaders from Mars*. Flash! Bang! Boom! It was something! I was proud of our boys.

In spite of our best efforts, the saucer kept coming, settling smoothly to the ground. A door in the side slid open, and a ramp extruded, like the alien landing in *The Day the Earth Stood Still*. A robot—the thing must have been six meters tall!—appeared at the head of the ramp and lumbered toward us. Bullets, rockets, bazooka shells whined off its tough hide without leaving a scratch.

It stopped at the foot of the ramp. Its visor winked up. A beam of blue light zapped out from the eye-slit, and our weapons were useless. You think I'm kidding. I'm not. That's the part that blanked out on TV and that no one will talk about. That robot had awesome, unheard-of powers.

Behind it, a bunch of transparent flimsy-looking creatures like a cross between something out of *Invasion of the Hell Creatures* and *Duel of the Space Monsters*

sauntered down the ramp, slung all over with funny-looking equipment. The Big Red One fixed bayonets and charged. The creatures paid no attention to them whatsoever. Halfway to the saucer, the screaming, psyched-up GIs ran square into the force field, like the one in *Forbidden Planet*. The bayonets went in and stuck, spidery blue sparks bursting out at the points of impact. The GIs couldn't get their weapons unstuck and had to retreat without them, leaving the rifles sticking out of the force field like toothpicks in cheese.

The creatures trotted around, setting up equipment, their bodies constantly changing colors: subtle, rippling hues like light seen through quartz. Evidently, they talked that way. Finally, they settled down. Since we couldn't do much of anything, we settled down too. Lieutenant McGraw passed me a doughnut and a cup of coffee.

At the top of the ramp, two creatures appeared, one flimsier and more translucent-looking than the others. I could see the skeleton and maybe an internal organ or two in the light from the doorway of the saucer. They promenaded slowly down the ramp, reached the foot of it next to the robot, and began changing colors: pink, red, blue, green, orange, like a beer sign. McGraw said he thought it was real pretty.

They had no more than started changing colors when a short one ran out from behind the equipment, jumped up and down in front of them, and turned scarlet. He waved a flipper at the ramp. The two turned, hurried back up the ramp, and disappeared inside.

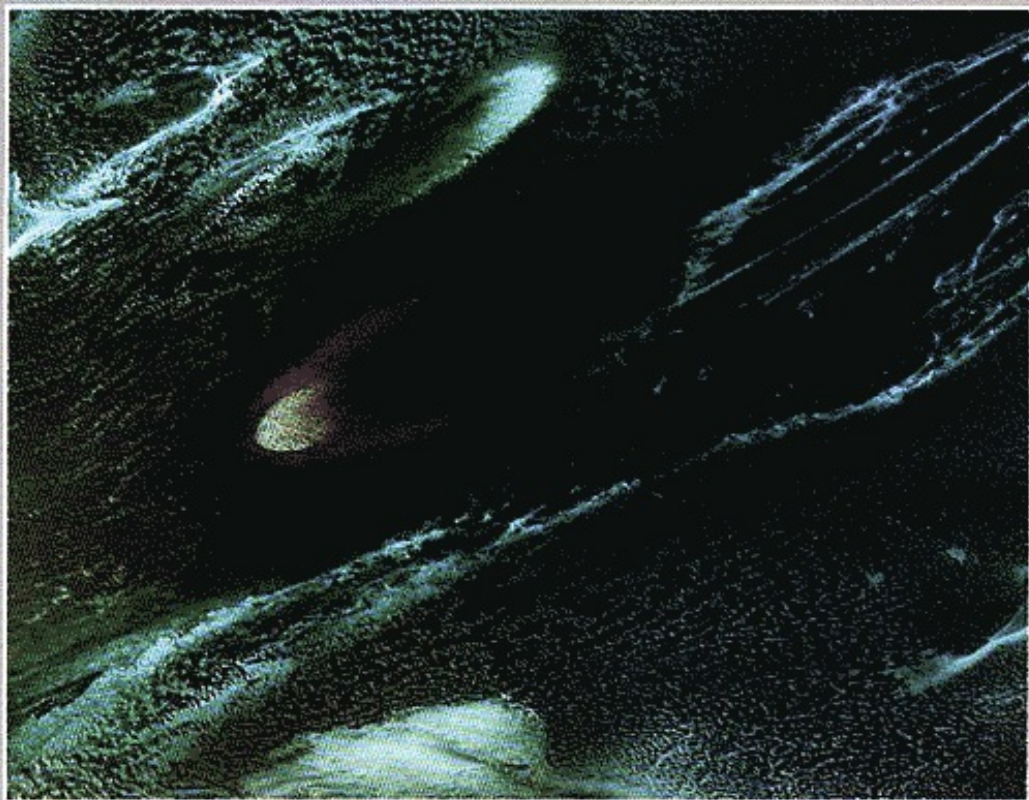
They reappeared almost immediately and started the slow promenade down. This time, the flimsiest one tripped and fell off the ramp, landing on a bunch of equipment. The short scarlet one, once it saw the flimsy one was okay, jumped up and down again. They started over. . . .

The fourth time they showed up, the military finally got it through their heads that the aliens were invulnerable. They stacked rifles (and bazookas and rocket launchers and F-15s) and just watched.

That caused the short alien to go apoplectic. It ran over to the edge of the force field and fumed at us in bright crimson. It waved its flipper arm and clenched a little fist on the end of the flipper. Then it fainted dead away. Other aliens rushed to it, examined it, and carried it back up the ramp and into the saucer. The others picked up their equipment and got aboard. The saucer disappeared into the mother ship. The mother ship went straight up, dwindling to a point of light and vanishing—all in the blink of an eye.

Lieutenant McGraw came over to me, frowning, puzzled, shaking his head, saying, "I don't get it. I just don't get it."

He never did. Almost no one did. The police, the Pentagon, all the thousands of scientists who worked on it under government grants—none of them got it. Most of us around the lot got it. We're film buffs. We know the value of location shooting. ☐



*No deaths. No births. The whole world
hung suspended, waiting. . . .*

THE MADAGASCAR EVENT

BY ROBERT HAISTY

He sat very still and closed his eyes and tried to imagine being smaller—as if he could step into the large end of a telescope and recede through the eyepiece, on and on until he was a speck, a point, gone.

Mark Wynette was not a totally unseasoned reporter, but now he had two fears in his belly, sicknesses rolling against each other like the virulent clouds which had enveloped them through the day and on into the night. One was the indescribable uneasiness about the thing itself. The other was Thompson. Thompson would be in no mood for it. Never. Sure, he was afraid of Thompson. City editors scream at their desks. They

shake your precious copy in your face: "... lousy chicken scratchings... Je-eezus Christ!... you call this reporting?" In less than a year at the *Morning News*, Mark had seen three pretty capable guys thrown out, and each time Thompson had said, "The story is always out there. If by some miracle there's not a story, it's your job to find out, by God, why!"

Mark stood up and shoved his chair back without even pulling from his typewriter the page on which he had written a single sentence. Up and down the line of reporters' desks the machines were rattling along frantically, and the people pecking at them were stealing hurried bites of stale

doughnuts and gulping cold coffee between phrases, without ever looking up—as if everything were perfectly normal. Mark shook his head sharply, trying to clear it. There could be no more delaying. The midnight deadline was now exactly nine minutes away. He should have acted before this. Long before this.

He made a right turn, which brought Thompson's cubicle in view straight ahead of him. Thompson hated the antiseptic new offices, hated being removed from the traditional center of the newsroom. Everybody knew what a fight he had put up before he was finally allowed to hold on to his battered old maple desk and his green eyeshade. All

the way down the hall you could still hear him yelling at someone, usually several times a day: "This is supposed to be a newspaper office, not a goddamn circus schoolhouse, insurance office...."—or whatever else seemed to fit the misdemeanor at hand.

An aura of Prohibition and crime reporters permeated the space within his half-walls, evoked probably by the ancient hangings, clippings, and photographs and by Thompson's own skinny frame and balding head. A slightly built man, he more than made up for it by the power of his lungs and the sharpness of his words. The queasiness in Mark's stomach reached a new

PAINTING BY ALDO SESSA

height as he entered. Sure, he should have done something about it hours ago. It was easy to see that now. But what, actually? Call the *Herald*? Christ!

"Uhh ... about the obits, Mr. Thompson—"

"Yeah. Where the hell are they?" Thompson was scribbling on his yellow pad and scarcely looked up when Mark came in. "You're an hour late with 'em, Wynette."

To Mark, it was entirely as if someone else's voice responded. He was numb, and frozen. Even his cheeks were numb. He said, "I'm afraid nobody died yesterday."

MARK'S CHRONICLE

The First Day: It wasn't as bad as I had thought it would be. Thompson choked at first and grabbed at his chest. He told me to get the hell out, he didn't have time for any goddamn comedians.

Then Thompson called Herby Squires at the *Star*. And the hospitals. I was right. He was only mildly furious that I hadn't said anything earlier. He knows nobody ever starts on the obits before the last hour.

No time to do a story on it. We just ran the line "No deaths reported." The other morning papers did the same thing, even on the West Coast. Wire services started picking it up about 8 A.M.

The Second Day: It is worldwide! There've been no births reported, either.

The Third Day: Panic growing. Trading suspended on the major markets. DJI down over a hundred points. Most schools closed. Government offices ordered to stay open. President on TV twice a day. Says nothing to be frightened about. We don't understand it yet, but scientists have several possible explanations. May be the dawn of a new era. Fringe groups say forty days to the end of the world.

The Fourth Day: Not much else in the news. You get used to it. The creepy feeling can't go on forever. Forever—what's that?

Thompson is amazingly mild. Almost cherubic. We don't understand it. This thing has gotten to him. We never used to have staff meetings; now we have them all the time. He wants human interest. God, there's enough of that. He assigned me to cover Parkland Hospital. Then he decided Ann should work with me on it, because "... there may be some women-stuff." My heart almost red-lined. Me, a seasoned reporter. I gulped, and probably squeaked, when I said, "Yes, sir." I am so crazy about Ann's level blue eyes and perky hips I would be happy doing a story with her in the depths of hell. Which may be where we are.

The Fifth Day: Thompson was right about the hospital. What they're mostly trying to figure out has to do with babies. There are no labor pains starting. No new pregnancies. We hear it from the nurses—there is already feverish debate in medical circles about doing cesareans. Some say it amounts to abortion. The baby remains in the fetal position, has a slow but steady heartbeat, does not respond to stimuli,

seems to require no nourishment at all.

The other side says yes, but would you condemn the poor woman in the ninth month to go around like that forever? "How do we know it is forever?" the first school asks. "We must wait and see what happens." This argument seems reasonable to me. What can it hurt to wait? But Ann is strongly with the Cesareanists. "Who knows what it may ultimately do to the mother's health—and the baby's, for that matter? Who knows if it will end? How long should we wait?" I do not have the answers. I have only a vague thought that, given an infinite time, everything will happen. We have evidently entered a segment of infinity in which births and deaths are not allowed. It follows that this arrangement will also change. In a billion years? Perhaps even a trillion?

The Sixth Day: The burn victims and the drowned and the ones who have lost too much blood—they fill the hospitals, remaining in a state of hibernation, just like the

6 Panic growing.
Trading suspended on the
major markets. ...
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day. Says nothing
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Fringe groups say
... the end of the world. 9

cesarean babies, until they are revived with oxygen or plasma or medications. But the number of hiberoids, as doctors are calling them, is steadily increasing. There have been reports of several accidental decapitations being repaired, but in every case the victim has not come out of the hiber state. There are also bizarre rumors of unsuccessful experiments with tanks of hydrochloric acid.

The Twenty-second Day: There has been no time for journal entries. Too much to cover, and we are too few. Ann is practically batty about this cesarean thing. I try to humor her, and she knows that's what I'm doing, and she hates it. The little bit of progress I had made toward sleeping with her is totally lost. She doesn't want to think about love now. A lot of women don't. Some men, too. We are doing stories on impotence. It hasn't affected me that way. Maybe it is the wallings of the fringe groups that bother them. They say we have only eighteen more days. Many have joined their movement.

The Thirty-fifth Day: The markets have opened again. Drug stocks crashed. Airlines and entertainment went up sharply.

Then drugs recovered. The sale of painkillers and tranquilizers has skyrocketed. It is calmer around the hospital now. For a while there was a panic rush to have major operations done before this thing, whatever it is, came to an end. Then we saw it was not ending, and people began to fear they might come out of the operation as permanent hiberoids, though it has happened so far only in accidents involving severe burns or massive tissue destruction. Even so, the undertaking establishments—all of which rapidly converted their facilities into storage vaults for the hiberoids—are reaching capacity limits. Imagine! Only five days left, if you believe the fringes. I don't. But you can't help thinking about it. There is much talk about time warps, but no evidence. Atomic clocks, relative to mechanical movements, or crystal oscillators or—for that matter—sundials have not shown the slightest deviation.

The Forty-first Day: Well ... nothing happened. If we counted right, we should have had it by now. The fringe groups are refiguring. I noticed an item on the wire service today about something called the Mössbauer Effect. I don't think we put it in the paper.

The Forty-second Day: Who has ever heard of the Mössbauer Effect? The Nobel committee must have. They awarded the guy the prize in physics in 1958. Thompson directed me to find out about it.

The Forty-fourth Day: A graduate assistant in the physics laboratory at the university agrees to talk to me about the Mössbauer Effect. "It is based on the recoilless resonance fluorescence of gamma rays," he told me. I did not understand. He went through it again. "When a radioactive atom emits a gamma," he said more slowly, poking his finger at the desk pad with each word, "the energy of the gamma is that of the excited state of the emitting nucleus minus the recoil energy imparted to the nucleus itself." "Like when you shoot a gun," I said, and nodded wisely. "Like when you shoot a gun," he agreed. "Now, if the gamma passes through an absorber where it could give up its energy—conserve energy and momentum—by exciting an atom there to the same state, the probability of its being absorbed would be very high. That would be a resonance absorption. It wasn't observed originally, because the recoil energies were too variable. Mössbauer showed that by embedding the source and absorber nuclei in a crystal lattice, he could make the recoil energy equal to zero in a large fraction of the transitions. Thus, he could observe greatly enhanced absorption."

"Now, if he arranged for a Doppler shift by moving the source relative to the absorber, even by as little as a few millimeters per second, he could cause the absorption to be measurably decreased. From the way this reduction occurs, we can deduce a great many things about the structure of the material and the position of the active atoms."

"That is the Mössbauer Effect," I said, secretly hoping I could explain it to Thompson with some reasonable degree of lucidity.

"That was the Mössbauer Effect," the assistant said dryly.

"Was the Mössbauer Effect," I said, correcting myself.

"We don't see it anymore. That can only mean there is no Doppler shift. The Mössbauer lines are so sharp we used to be able to see energy shifts so small they would correspond to a temperature of one ten-millionth of a degree. Now there is something funny with the Doppler shift. Time is screwed up."

The Seventy-third Day: Apparently, the graduate assistant was right. Scientists all over the world seem to agree: We are at a nodal point in an extended geocentral time warp. Which is another way of saying we are an intermediate stop for some kind of space voyagers. It's not entirely as physicists used to think it would be, and there is no way of telling whether it is permanent or, if not, how long it will last. It could all end in the last minute.

The Two Hundred Sixty-first Day: Suddenly it's summer, and so beautiful again. I don't know how we got through the winter. Mostly with liquor, I guess. And that was only the first winter. The first of eight hundred million, perhaps, they say. The theories about the warp are beginning to congeal into something I can almost understand or at

least believe. The Mössbauer measurements are hard to dispute.

Ann was right about the cesareans, of course, as the women everywhere have long realized. If I could find a pregnant woman today, I'd have quite a story for the front page.

The Three Hundredth Day: Something big has happened. We felt the vibrations here, halfway around the world. Communications are still sketchy. The first satellite photos show it as a white blob in the region where Madagascar should be. Pilots in the area reported a water funnel that opened the ocean five miles down, all the way to the bottom. One of them claimed to have seen a flash of greenish-yellow streamer, curving in a parabolic arc as far as the eye could see.

There was an eternal instant of vacuum, then the horrible, grinding quake—and the tidal wave.

The Three Hundred First Day: It was nearly midnight when I got the call from Parkland Hospital. I sat there nodding, the instrument clamped tight against my ear upon my right shoulder, as I mechanically took it all down on the yellow pad. I even managed to ask a couple of questions. "Okay, thanks. Keep me posted," I said, incredibly—as if there was nothing else to say. Then I hung up and sat there struggling with comprehension, staring unfocused at my notes. How is it possible that a thing like this can be reduced to a few scribbles on a piece of

yellow paper? Roger Foreman was on his way back from the Coke machine, and he must have noticed something about the way I was looking. Roger is one of the old hands, and he can put a story together from a mosquito belch and a chigger egg, but I don't think it took that kind of ability for him to see there was something terribly wrong.

"Hey, Mark—" he said. I hadn't noticed he was behind me, and I jumped six inches.

"It's over, Roger. Like somebody pulled the stopper. Hundreds are dead. Thousands! And some of them are—"

"You better get this in to Thompson," Roger snapped.

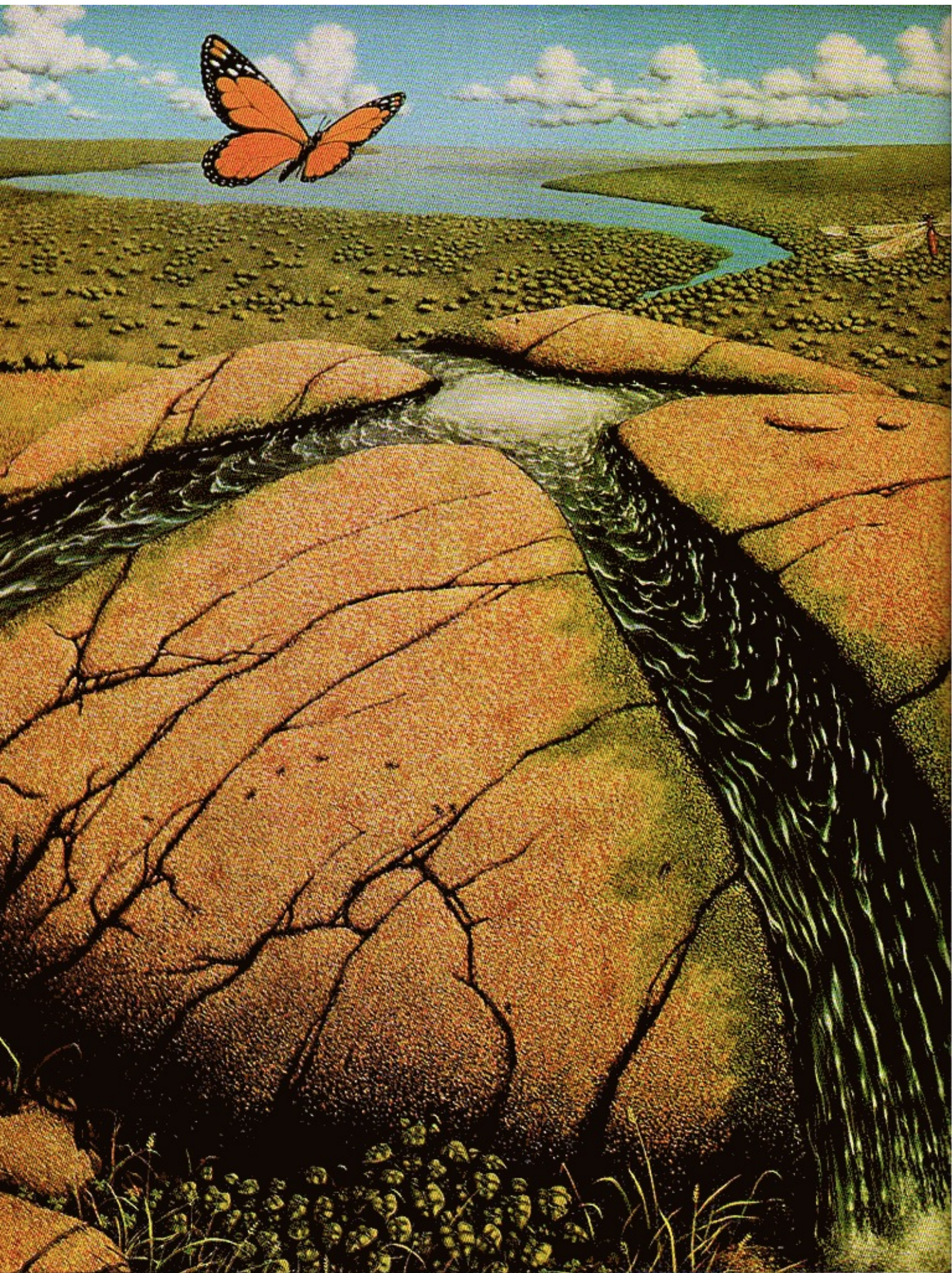
I looked up at the clock and headed out in a run. The deadline! There was still time. "We've got obituaries, Mr. Thompson," I shouted as I rounded the corner to his office. "People are dying everywhere. But the weird thing is, it's like a lot of them have already been dead for a long ti—"

I stopped, because Thompson was not there. Only a chalky skeleton in rotting, shredded garments was sprawled in his chair, with the bony fingers still clutching at the rib cage, and the green eyeshade all askew.

Roger had come up beside me, and after a minute he said, "God, there's going to be a lot to sort out."

I didn't answer. I had the feeling it was his way of praying. 





THE EYES ON BUTTERFLIES' WINGS

*They wanted to break free of this
controlled society,
but fear kept them all prisoners*

BY PATRICE DUVIC

Everybody sat and waited. Maybe the butterfly would go away. . . .

The butterfly with the eyes on its wings, watching.

But, deep inside, they knew it would stay. Or would pretend to go away and then sneak back, unnoticed. So they didn't say anything. Didn't even talk about something else.

And were frightened that their silence would give away what they were thinking. If they were thinking. . . .

They tried not to. Succeeded more or less. Less. More. But couldn't keep themselves from watching one another. Asked themselves, *Why is he moving his fingers? Why is he looking at me? Why is he thinking? Why won't he stop thinking? I can tell he's thinking. With that butterfly here in the room! Why won't he STOP thinking? Why can't I stop thinking?*

Watching one another would reveal too much. And without being positive that they were deceiving the butterfly or that it was gone, they didn't dare close their eyes.

So they stared at the eyes on the butterfly's wings. And let themselves be hypnotized into oblivion. Oblivion was safe, and, after all, tomorrow would be another day.

A very slow fluttering of the wings. And you wait for it to cease, and it almost does, but it doesn't. It slackens, pauses, and then starts again. Over and over.

Then, after a while, the butterfly left the room.

So did they. Anyway, they didn't feel like talking any more. More like sleeping.

Dreaming.

Colors.

He was on the point of waking up, and images were still lingering before his eyes. Colors. As if he were in deep forest. And under the trees, flowers that were not really flowers but more like butterflies on a stem, butterflies made of feathers.

He tried to stay asleep or, rather, in this state between sleep and awakening. To remain in his bed for a while. And to remember his dream.

To remember a dream, one of his friends had once told him, you've got to go backward. You've got to try to remember the image just before the one you have in mind. Never let yourself get trapped by the scene that comes next, because then you'll find out very soon that you're wide awake and the whole dream's fading away. The scene that comes before; once you've got that, just go on backward, always backward.

My bladder hurts.

I'm walking in the forest, looking for some kind of castle. No. In fact, it's not exactly a castle, more like a very large house, a colonial mansion but somehow very Arabic. Arches, colored tiles arranged in an intricate Escher pattern underfoot.

Nearby there's a swimming pool. The water is green with tiny floating plants. But they've emptied it. And the ladder doesn't reach down to the concrete bottom. I'm playing there with my balloon. I often do. And I'm telling myself stories, inventing imaginary adventures. Can't remember which.

PAINTING BY BILL MARTIN

I'm a kid, and my parents are up there, in front of the colonial mansion. They can't see me from where they are. *My bladder is hurting, worse and worse*, and I don't want to jump to catch hold of the ladder, climb the ladder, and walk to the house, to the tiled bathroom.

The concrete bottom of the swimming pool is still wet in places, green with algae. It wouldn't show. And I have to pee.

Wake up! You know what kind of dream this is, where you dream you're pissing. But it's not just a dream, and you're going to wake up and find the sheets wet and cold.

So he got to the bathroom, still half asleep, with a vague memory that he'd been dreaming. Pretty soon, though, he couldn't say what the dream had been about. Just that there'd been colors in it.

After a while, he wasn't even sure of that. He got to the kitchen, put some water in a kettle, turned on the electric stove, and opened the window.

A few butterflies flew past him out of the open window. Who knew how long they'd been hiding in the apartment?

And how many were still in it, behind one piece of furniture or another.

There were strange and terrifying stories told on the subject of butterflies, the sort of rumors that no one really dared talk about but that everyone had heard at one time or another. And you'd wonder why such stories spread so easily. But they did.

It was said that these stories began as facts taken from old entomology books. Supposedly taken from old entomology books. But no one dared to go to a library and ask for an entomology book any more. It would have looked very, very suspicious.

Was there some legitimate reason to try to learn more about insects? For what reasons would one be interested in entomology? Except. . .

So it was difficult to know if the rumors were reliable or not. They sure looked like pseudoscientific paranoia. But. . .

Anyway, before they all died, when you could still find them outside natural history museums, birds used to feed on insects, all kinds of insects, including butterflies. At least, certain species of birds did. Because there were also birds of prey that fed on smaller birds, the very birds that fed on the butterflies.

So to protect themselves, the butterflies learned (or maybe they didn't learn; maybe it was just some kind of Darwinian selection, but that wouldn't change anything either way) to mimic birds of prey.

A sparrow would try to catch a butterfly and, suddenly, find itself faced with an eagle and fly away. But the eagle wouldn't really be an eagle, just a small butterfly pretending to be an eagle, a butterfly with eyes on its wings. And that kind of butterfly would survive and reproduce and spread all over the world. Millions, billions, of butterflies with eyes on their wings.

Butterflies, you see, really had a knack for survival. But sparrows were not their

only problem, because before turning into winged adults, imagoes, butterflies were caterpillars, and farmers thought of the caterpillars that ate their crops as a plague. So the time of pesticides came. And at the beginning, they were very effective.

Except that insects, and especially butterflies, adapted very quickly. And caterpillars not only began to find pesticides very nice seasonings, they became addicted to them and got to the point where they needed greater and greater quantities.

And where do you think they could find these very high concentrations?

Ever hear about food chains?

The highest concentration of pesticides can be found in the vital organs of carnivorous animals. Men, for example.

As you can see, these stories very much resembled the kinds of stories parents always tell their children to frighten them. "If you don't stop it, if you don't drink your soup, if you keep on being naughty, the butterfly is gonna come. He's gonna lay his

• There were strange and terrifying stories told on the subject of butterflies, the sort of rumors that no one dared talk about but . . . everyone had heard at one time or another. •

eggs in your liver and in your kidneys and in your brain. And the caterpillars will eat you. And you'll be very, very sorry. . .

"But there'll be nothing we can do. It'll be too late. We'll be very sorry for you, but it'll be too late."

"But Daddy, the butterfly won't know if we're bad. If you don't tell him, he won't know."

"Oh, he'll know. You see, he's got eyes on his wings."

But grown-ups are no longer kids. And for one thing, they know that it would be nearly impossible—no, quite impossible—for a butterfly to lay its eggs in a human brain and for a caterpillar to survive in a human body.

Unless they get help.

Now, sometimes when you need help, and even if you're a butterfly, you'll find people willing to help you. Especially when they've got something to gain from it.

And if people could use these butterflies to spy on everyone, they'd have something to gain from it indeed.

When he looked for the cigarettes in his pocket, he found the carefully folded sheet

of paper. He was supposed to Xerox it. Twenty copies, more if he could make them. As long as he took the necessary precautions. To spread revolutionary thinking all over the world. He hadn't even read it, which, he had to admit, was very significant. A year earlier, when he'd entered the Movement, he really hadn't been able to wait to read the things, would even take risks to read them as soon as possible. To him, then, they had had tremendous importance. But he didn't care for them anymore. Nor for the meetings.

He didn't even know why he was still attending them, and he got the definite impression that they never led anywhere except to more meetings. Meetings that, like the last one, would stop in the middle of a sentence, as soon as a butterfly appeared in the room.

Strange thought, but, in a way, we really need to believe that they're watching us, and we'd be—they'd be—very disappointed if we found out that they don't, because it confirms our belief that we're important, that we constitute some kind of a peril for the System. That we're dangerous and that we're working in the right direction.

Maybe that's what the butterflies are for, not only to spy on us but also to convince us that we can be dangerous to the Establishment.

But why?

So that we go on doing the same thing that we've always done! Twenty Xerox copies of Xerox thinking. . .

Xerox thinking. The idea made him smile.

The problem was, he didn't know what else he could do.

As he entered the photocopy room, with the leaflet hidden in the middle of a bunch of other documents, he saw that someone was already there, which was quite unusual for that time of day. He decided to come back later.

"No, wait! I'm nearly finished. Five minutes at most. But if you're in a hurry, you can make your copies now. I'll wait. Really."

"No, no hurry. But I've got a lot of documents to Xerox, so you'd better finish yours first."

"Okay."

He didn't know precisely why, but there was something about the guy that he didn't like. Just a little too friendly, and there was too much interest and curiosity in his eyes. He made you think of a friendly spider.

Exactly the kind of situation he was afraid of. Especially now that he had made his decision. The next Movement's meeting would be the last for him. And the tracts he was going to Xerox were the last he would do. It would be too stupid if after a year of clandestine Xeroxing it was precisely this last time that he got into trouble.

But he had to do it. He didn't want the others to think he was quitting out of cowardice. He wanted that to be quite clear. In fact, the ideal would be to make a huge number of copies, ten times what they asked for, two hundred copies—throw

them in their faces or tear all two hundred apart in front of them.

No. Let them have the fucking copies and do whatever they want with them; better, take what they've written and make corrections, add comments of my own, and bring them copies of that.

He'd really like to do that.

But he knew what that would lead to. Accusations, speeches on the Right party line, on the dangers of political heresy, the dangers of individual thinking, individual initiative, of objective compromise with the Establishment, the dangers of leftism.

What about the dangers of stupidity?

Might as well talk to a brick wall. Endless discussions. They're so sure they know the truth. Always putting themselves in the role of the judge, always anxious to find you guilty. That, precisely, was what made him sick. The mere thought of it made his stomach twist. His throat was dry. He tried to swallow, couldn't.

In a way the Movement looks almost exactly like the System. Mimicry?

Like the butterflies.

Trying to protect itself, to go unnoticed, the Movement begins to resemble what it's supposed to fight.

Or has it always been that way? Was I just too blind to see it?

The idea made him even more uneasy. Sweat was dripping from his forehead, and, of course, the friendly spider saw it.

"It's really hot in here, isn't it? Something wrong with the heating."

"Yes." The second he said it, he knew it was a mistake. He knew what the guy would say next.

"I think I'll open the transom. If you'd help me move that case over there, I'd climb on it and do it."

"Are you sure that—"

"Yes. I've got more work to do in here this afternoon. And if there's no one to help me—"

"Okay, I'll help you."

"Thanks."

Open the transom. It seemed more and more like a nightmare. If he opens the transom...

A minute later, there were at least fifteen butterflies flying around them.

"Oh, butterflies!" The guy was entranced. "They're so beautiful, aren't they? So beautiful! Those colors—"

"Yup."

"Creatures of God. Angels. You know, I really think they are. Guardian angels. Messengers of peace and beauty, the very image of paradise on earth, helping men to follow the right path. We're all sinners, and every one of us is weak."

"Who knows what would have happened to us if God hadn't sent them to help us? Mankind would have gone on to inevitable destruction. Violence, murder, riots, disorder, anarchy..."

"And they're so beautiful. I can stay hours just watching them."

God, HE watches THEM! What did I do to deserve HIM? He's insane!

His eyes were brilliant with inner conviction, with an obsessive drive. Probably the guy thought of it as joy, convincing himself he was happy. But his eyes were just too brilliant for happiness, for anything but insanity.

Religious nut.

And he loves the butterflies.

How can someone love butterflies? Vermin just there to watch us, to spy on people, and we would be supposed to love them!

But people loved God, didn't they? Where's the difference? When you think about it, God is the ultimate dictator, his universe the ultimate police state. He knows everything; you can't hide from him. Everything you do, your most intimate thoughts. He kills, can kill (no, call back to him. Sweet euphemism) anyone, whenever he likes. Even in death you can't escape him; he's got his torture chamber. Hell, where he can imprison you forever.

A good thing he didn't believe in God, at least in that kind of a God.

Am I really sure I don't?

In fact, police states use that resemblance—mimicry again?—use our superstition to control us, use our fear of God, even if it's so deeply buried in our brains that we don't think we have it, to manipulate us.

Butterflies everywhere. The Eyes of God everywhere. It fitted. There was some logic in that.

"Cooler, isn't it?"

"Excuse me, I'm just—"

"I said, Cooler, isn't it?"

"Yes indeed. Yes."

"But I can see I'm interrupting your thoughts. What were you going to say?"

"No, nothing. I was just, you know, thinking about what you said, butterflies being angels—"

"They are, you know, they really are. Many people don't like them, are afraid of them, but they're wrong. There's nothing to fear from them. I've heard stories you wouldn't believe about butterflies eating people. That's absurd. They're so beautiful, and they love us, you know, they really do."

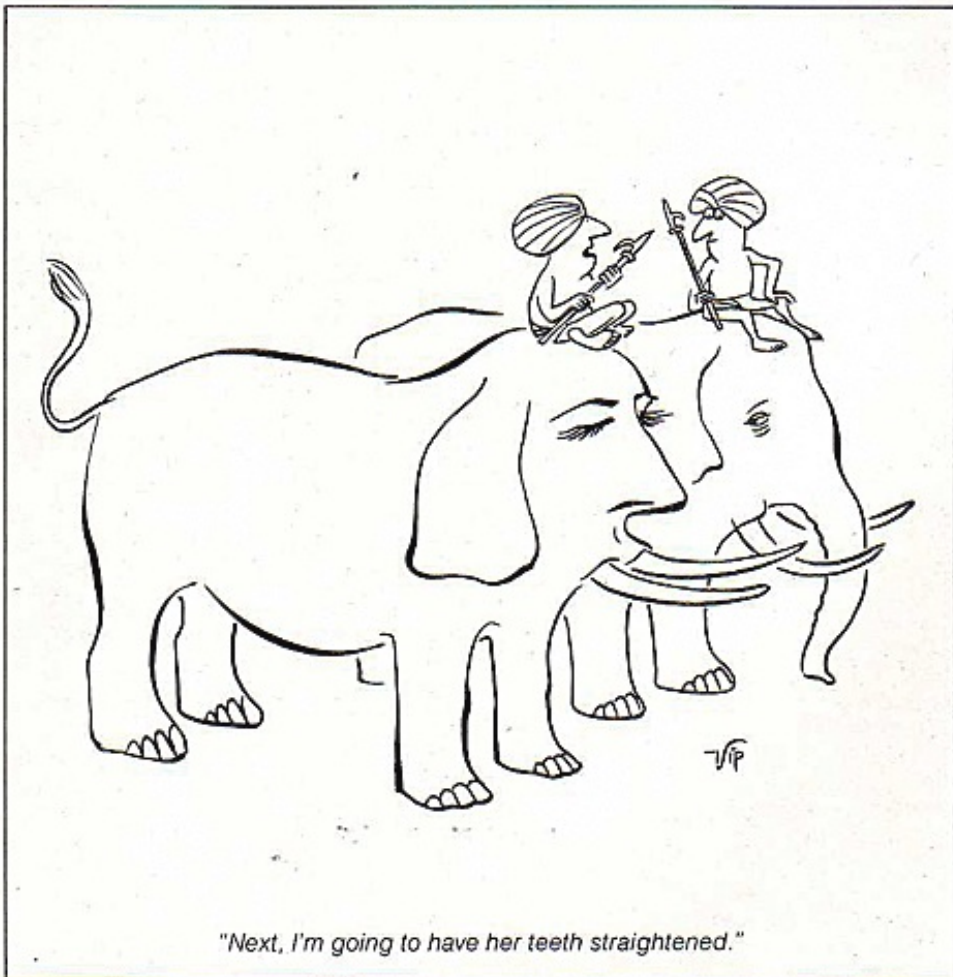
"Like God does. . . ."

"Exactly."

"And you know, I used to be afraid of the butterflies too. I didn't feel right; I wasn't comfortable in my skin. Doubts and so on. I couldn't communicate with other people, with my brothers. Life didn't have any meaning then. And I even thought of joining some of those underground political movements. Jesus, he knows. And I can understand why people do that. I don't condemn them. He knows, that's for sure. Because they just haven't met God yet, and they don't know the truth. But I know the Truth now, and I'm happy."

His eyes were more brilliant than ever.

He would hypnotize me if he could. He also thinks he knows the truth, the one and only Truth. They're all cut from reality, all of them, imprisoned in their cocoon of truth.



"Next, I'm going to have her teeth straightened."

"Well, I must go now." Nearly crushed his fingers, put something in his hand, and left. "Good-bye, Brother, and don't hesitate to call on us."

He found himself alone in the photocopy room. He and the Xerox machine, surrounded by butterflies. He was on the verge of a nervous breakdown, still wondering why he'd kept his mouth shut. With all the shit the guy had been pounding at him.

He took the thing that the guy had slipped in his hand: a sheet of paper, quite evidently a Xerox copy of a leaflet, a tract.

The friendly spider was also using the machine to make leaflets. That was probably funny, but he didn't feel like laughing.

There were now at least twenty butterflies in the room. They might have followed this guy who loved them so much, but they hadn't. They'd preferred to stay, obviously they'd preferred to stay with him, a poor little fellow with his problems and who didn't feel at ease. They were so full of love that they couldn't leave him alone.

Probably wanted to show him the way to God, to the ultimate Truth that would change his life forever.

Shit.

He didn't know why he did it. Just that he felt terrible afterward, terrible but better. All the tension released, suddenly gone.

Everything had added up together: his guilt toward the Movement, that guy who looked so satisfied with the System, his fear . . . and the butterflies fluttering all around him, everywhere. He was at the point where he would have made the copies anyway, even with the butterflies, hundreds of them, whatever the consequences might have been. Just to prove to himself that he wouldn't fall into paranoia, let paranoia get the best of him: Butterflies just couldn't read, even less when they could see just the back of the leaflet.

But they just wouldn't let him use the photocopier. There were always four or five of them on the glass. Waiting, making fun of him. When he tried to shoo them away, more came.

Always the same hypnotic movement.

And they wouldn't leave, as if the situation amused them.

He saw himself, as if he were someone else, fold back the flap. Crush the butterflies under it. The barely perceptible noise of the crushed thoraxes. He didn't let them escape.

Set the switch of the copier on "color."

And pressed the button. A flash. A copy of the dead butterflies went out of the machine. The eyes on the wings, the yellow-green splashes of squeezed abdomens, a wing folded, as if one of the butterflies had tried to fly away at the very last moment.

A very impressive image.

He made one more copy, then another, then ten more.

He lifted the flap, put the leaflet very carefully on the dead things, and set the machine on "automatic."

He sat and watched the copies coming out. Tchak, todo, tchaktodo, tchaktodo,

tchak. . . . It looked like an animation film, as if the butterflies were still alive and trying to escape from the sheets of paper but failing. Try and fail. Over and over.

After a while, there was no more paper. The machine stopped. The Xeroxed butterflies froze forever.

He waited for the guy to come back and kill him, for lightning to strike him, for something to happen. Nothing did.

So, very quietly, so quietly it surprised him, he took the dead butterflies, put them in an envelope, threw it in the incinerator, cleaned the glass, took all the copies with him, and left.

He woke up screaming.

And this time it wasn't difficult to remember the nightmare. The images were so vivid he felt he would never forget them, even though, at first, they didn't seem to make sense.

He was walking on a transparent glass surface. It was huge and reached to the

He didn't know precisely why, but there was something about the guy that he didn't like. . . . There was too much interest and curiosity in his eyes. He made you think of a . . . spider.

horizon. Under his feet, deep below, there was a blazing light moving forward and back, forward and back.

The sky was uniformly red, except for a yellow cloud with a black lining. And the cloud was coming in his direction. There was a voice. Not a voice of thunder but a friendly voice, the sound of which reminded him of his father.

"We now have all the data we need to Xerox you. And that's what we are going to do, make a copy of you, a three-dimensional copy. And no one will ever notice the difference. The only person who'll know it's a copy will be you. But you won't be there anymore."

"It won't be a puppet or a robot or a zombie. It'll be something more and something less. An image."

"And, just like you, this image will think, will love, will experience joy and fear. And the funny thing is that it will even be afraid to be replaced by a copy."

"Why? But why?"

His whole body was covered with sweat. Drops were falling to the glass surface, splashing green oily splashes.

The voice answered.

"Change is Evil. That way things won't change. When everyone has been copied, the world will be perfect, a world of images in which no one will die anymore. A world that will last forever."

Then, more clouds came over the horizon. And suddenly all the sky was like black rubber, a gigantic flap that was going to crush him against the glass surface.

And this flap was made of butterflies, billions of them, with eyes on their wings.

So he tried to escape, to run away. Arrived in a deep forest, a jungle.

He knew that within the limits of the forest he would be safe. And he came to a very small primitive village, just a gathering of huts. The people were in the village square, holding a meeting. He knew these people were the last Incas. And he thought that he should take a few photos of them and of the village. He pointed his camera. The people turned their heads, hid their faces behind their hats, behind their headdresses made of colored feathers and tropical butterfly wings, blue and silver wings like mirrors.

That was something he'd heard about, that primitives didn't want to be photographed, that they were afraid you would steal their soul. How stupid. Magical thinking. Afraid that some witch doctor would use their photos to cast spells on them. He felt pity for them and went to explore the village.

A little away from the meeting a man was sitting in front of his house. He wanted to take a picture of the man's face but the man's back was turned. He walked very quietly, silently, like a feline, so as not to frighten him. Then ran, surprising him, and took the picture. The man didn't have the time to hide his face. In fact he didn't even try to. Just smiled.

Then came understanding and fear. The man was himself, or rather his double, his mirror image.

And he thought: "Now you haven't got a soul any more, just a Xerox copy of a soul."

And that's when he woke up screaming.

Not too difficult to figure out where all the Xerox imagery came from.

But there was something more. Something that linked up with all his conscious and unconscious fears, with everyone's fears. *The fear of not being me anymore, of being replaced by something that wouldn't even know it wasn't me anymore.*

A fear as old as mankind, and maybe even more ancient.

There was the folk belief that you can see your double just before you die. Or rather that all through your life your double is part of you, and that sometime before your death, a month, a week, perhaps a few hours, he goes away.

The primitives who were afraid of the camera.

In a way, we share the same fear.

No witch doctors any more. Computers.

And we're afraid that a computer will get an accurate image of ourselves. Yes, accurate enough to be used for imitative magic.

No more dolls with needles stuck in them, but magnetic tapes, video recordings, perforated cards, data banks.

He made his first attempt at the very beginning of the meeting, in a quite awkward way. Raised his hand and said, "I've got something to tell you about the butterflies. I've been thinking, and—"

"I'm sorry. It's not on the agenda. No unscheduled matters. We can't afford to waste time. We don't know how long we'll be allowed to continue this meeting. So priorities first. Okay?"

So they got to priorities, until they noticed that, of course, there was a butterfly in the room.

Everybody sat and waited.

Everybody but him.

That was the moment for which he'd been waiting.

"Well, as no one seems to have anything more to say, maybe I should tell you what I want to tell you."

They looked at him as if he were mad. Anxious glimpses in the direction of the butterfly.

He didn't feel too good himself and delivered his speech like an automaton, very quickly, without looking at them.

"As I tried to tell you a little earlier this evening, I've been thinking. You probably know that butterflies, I mean certain species of butterflies, have a particularly developed sense of smell, so that, for in-

stance, a male butterfly can smell a female butterfly from more than fifteen kilometers away and go and find her.

"Now, when you're angry, or anxious, when you don't feel okay, and most of the time we don't, I mean, if you don't like society the way it is, and you want to change it, to do something about it, I mean, meetings like this one, although I don't think they lead anywhere, in a way you're frightened. Right? You're filled with anguish, very excited, and distressed. And when you are like that, you emit a very specific smell."

"You are right now. I can't smell it, but I know you are."

"Shut up. You're insane. What do you want? To compromise us all? We don't want to have anything to do with you. We don't even know you."

"Neither do I. But I won't shut up. Because I'm not afraid of the butterflies. And I don't think you should be either. I'm not afraid of them, and I don't think they're spying on us. I think they just come when we're afraid of being spied on, when we give off that specific smell that says, 'I'm afraid to be watched.' The Establishment, the dictatorship, whatever you want to call it, doesn't need to spy on us. It just needs to have us think it's spying on us. Because then we're paralyzed, don't dare do anything, don't even dare think."

"And these eyes on the butterflies wings aren't there to watch us, but to make us think that we're being watched."

"We're just like mice, hypnotized by a snake, waiting to be devoured."

He looked at them. He knew it wasn't a good speech, but he'd hoped for some reaction. And they were doing their best not to see him, not to listen to what he was saying. It was exactly like addressing an assembly of salt sculptures.

"Well, sorry to have upset you. It's been a hard day. Good-bye."

He went to the door and opened it. No one moved. In a way he would have preferred to have them attack him, even kill him, but, ironically enough, the presence of the butterfly was protecting him.

The room must have been stinking with anguish and fear and hatred, because the minute he opened the door, a hundred butterflies flew in.

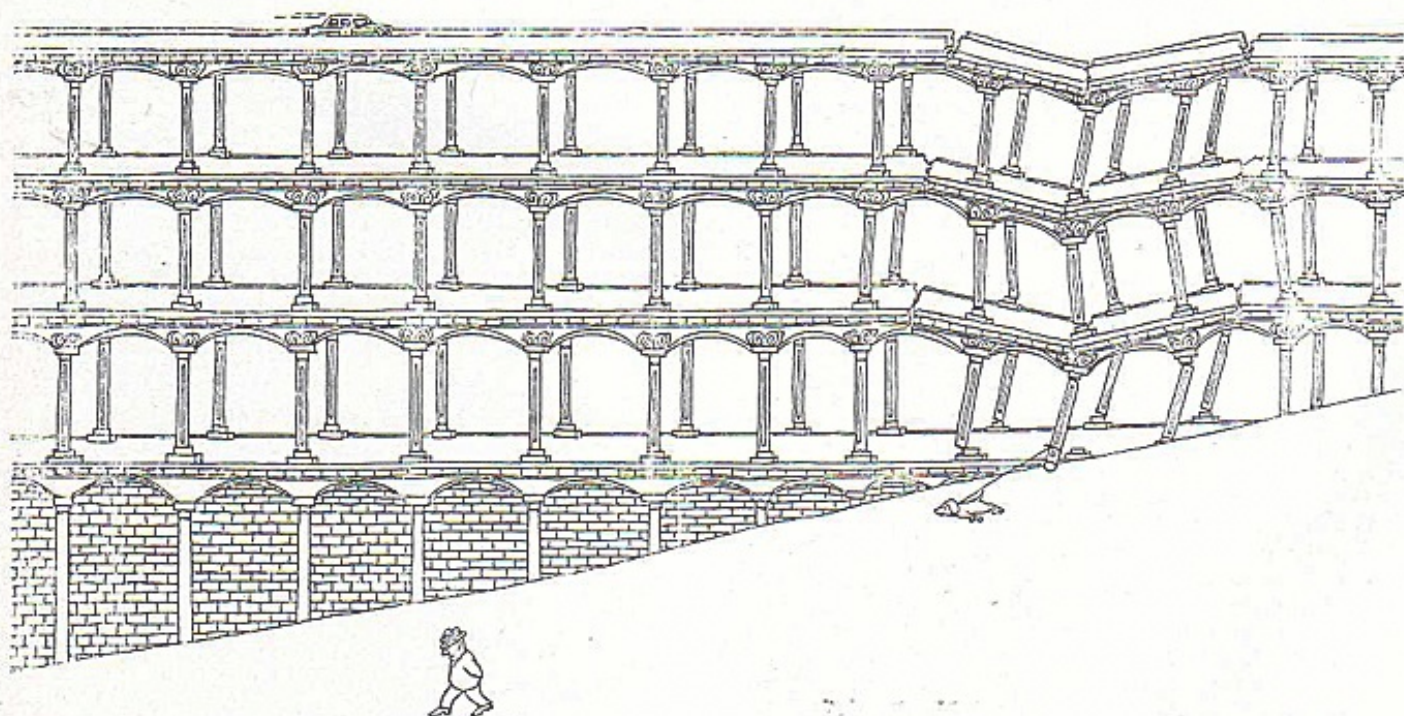
"Sorry, again. I just forgot something."

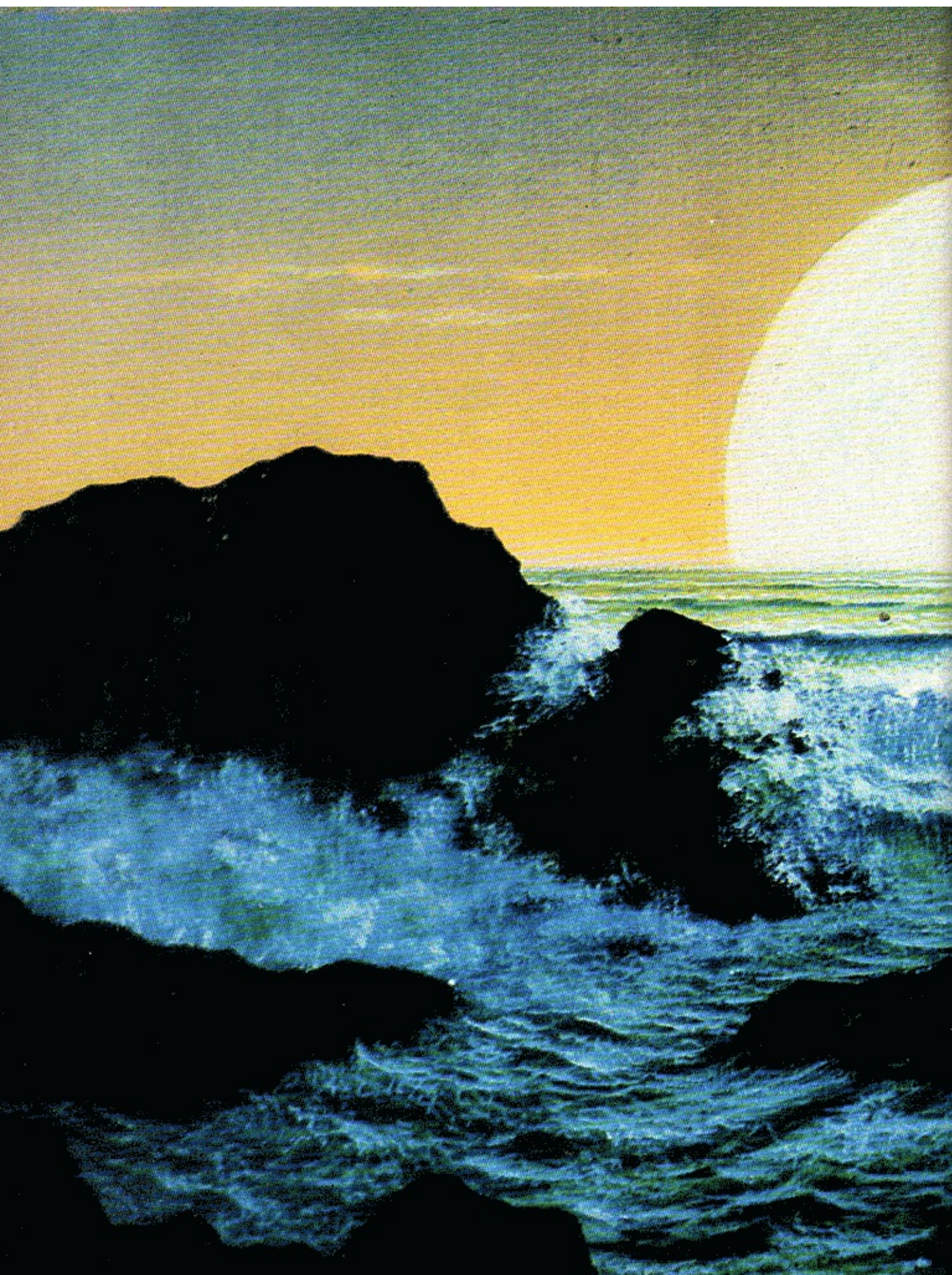
He tossed all his leaflets in the middle of the room, toward the ceiling, closed the door on live and Xeroxed butterflies fluttering together in an intricate, nearly surrealist, aerial ballet. And left.

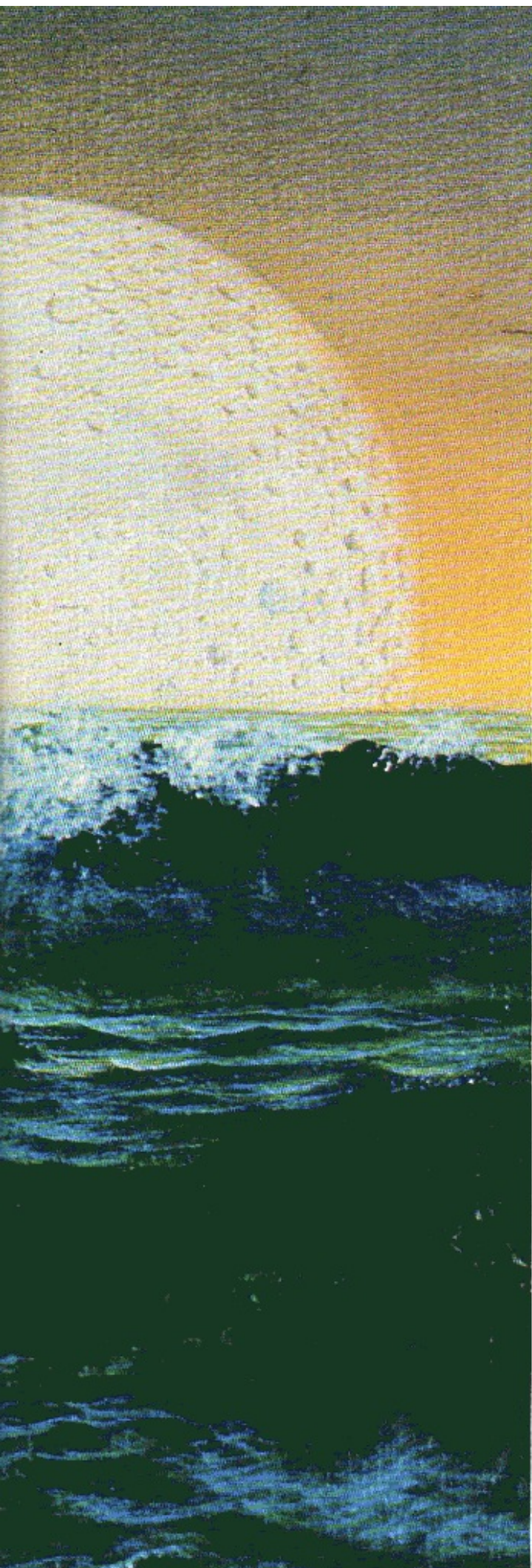
He didn't know what he was going to do next, or what the future would be like, but he felt better than he had in years.

Not a single butterfly followed him.

A wasp did, though. But maybe it was just an ordinary wasp. 







The invention solved the energy problem, but it took a sea captain to solve the inventor's problem

OIL IS NOT GOLD

BY SAM NICHOLSON

I admit I was patting myself on the back when I got home from the asteroids. True, I had stepped on a few toes and bloodied a few noses—I have always found troubleshooting to be a dirty job, whether at sea or in space—but the Company subsidiary Space Mining, Inc., had swept up two billion dollars' worth of metals for the moon smelters.

I figured the Company's main office was feeling pretty good about the asteroid haul, so when Mickleberry in Operations ordered me to New York from Space Mining's Assembly/Launch Complex at Canaveral, I assumed the old fox just wanted to take soundings, as usual.

I barged into his office—and thought *uh-oh!* Mickleberry was giving me his curt nod and thin smile. He waved me to the hot seat.

I eased my bulk into the worn wooden chair and waited. He cleared his throat. "Captain Schuster, the Company is not exclusively concerned with dollars and cents."

"That so?" I said genially.

He interpreted this as *oh yeah?* and got his pinched-nose superior expression. "In both departments—the sea fleet and the space metals—we must maintain our image as a solid yet progressive and fair-minded organization.

PAINTING BY DON DIXON

Executive-level utterances can make or mar this image."

Whenever Mickleberry started talking *image*, he was leading up to the fact that I tend to shoot off my mouth. I complained, "Jeez, Mickleberry, we've been through this lecture before."

"Not this lecture, Captain Schuster. Your recent space exploits have made you a prime media object, at a time when special-interest groups are highly articulate and able to—uh—hype their critics to death."

He put his fingertips together and continued. "We are living in a jungle of intolerant minorities who effectively deny free speech to everyone but themselves. Recently, Captain Schuster, you have been voicing opinions—*Third World grifters—fat dames in pants*—and the Company has been under considerable pressure to fire you."

"Okay, fire me. It wouldn't be the first time."

His blue eyes were cold. "Yield to minority pressure? We would rather persuade you, Captain, to employ the secret weapon of the Silent Majority—namely, *silence*, which presents no target for—uh—hysterical yapping, while it exerts its power at relevant levels, such as the ballot box."

I thought this over. I personally got a charge out of mixing it up with the yappers—but I did not want the Company viciously smeared or boycotted.

Mickleberry went on, "It would be best if you maintained a low profile during the next months—and therefore we are taking you off the space-mining projects."

I told myself Mickleberry had opened with the Bad News. Now would come the Good News. I grinned, "I'm gonna be working on the old briny, hey?"

"Not exactly on the sea, captain. You recall the experimental tank ship we chartered to Taccon Oil, specifically for their field-shift shale-converter in the Gulf of Mexico?"

I had been in space when the deal was made, so I was not up on the details. As I understood it, a scientist had found a way to field-block an air chamber in the sea and, by the same principle of molecular control, to convert shale to a heavy liquid at the source and pump the liquid into tank ships for further refining.

Of course, Taccon had their own worldwide fleet, but they needed a different pumping system—larger-diameter lines, stronger pressures, tank circulators to keep the sludge from solidifying. It was cheaper for Taccon to charter a ship from us than to withdraw one of their own tankers from profitable trade.

I asked Mickleberry, "What kind of charter party?"

"Since the *Holmen* is experimental, we insisted upon our own officers aboard. However, they take orders from Taccon, and a dispute has arisen. The *Holmen* is now dry-docked in New Orleans, and Taccon has fired our skipper."

"Can they fire him?"

"You're the sea lawyer, Captain." Mickleberry tore off a memo sheet and handed it to me. "Your flight leaves Kennedy in two hours. Pick up your ticket at the airline desk."

I just sat there and eyed Mickleberry. "You want me to maintain a low profile—and you're sending me to tangle with a triple-dealing, public-be-damned, price-gouging oil company?"

Mickleberry smiled his pale smile. "I think you will find, Captain, that Taccon Oil is bigger than all of us."

The ship's agent met me at the New Orleans airport and drove me the considerable distance to the dockyard. Mickleberry had been misinformed on one point. The *R. T. Holmen* was not in the dry dock but alongside the dockyard pier.

The watch officer at the top of the accommodation ladder had spotted the car entering the gate, so a seaman was waiting

*• That it should happen
in America—I think that makes
me craziest! A
free country—but who is free?
Nobody who buys
oil! There is no Congress—only
an oil lobby! There is ...
only oil—oil! •*

on the dock to take my suitcase.

I thanked the agent for the ride, climbed the accommodation ladder, shook hands with the officer, and continued topside to the skipper's quarters, where I really began to enjoy myself. His office had room—and if the air conditioner conked out, I would not need to grab for a space suit.

The skipper was a decent young chap named Cummings. Sober-faced, somewhat inflexible—but I had approved Mickleberry's decision to promote him to Master. I figured he would loosen up as he became older and more sure of himself. He was smart and handled personnel problems well, and apparently was managing to stonewall Taccon Oil.

He had been writing at his desk, but he stood up when I appeared in the doorway and came forward to meet me.

As we shook hands I noticed that the table in front of the settee held a pipe in an ashtray, a half-filled glass, and a turned-down paperback.

Cummings followed my glance and smiled, "Dr. Von Reinstad split when the third mate phoned up here that you were at the gate."

"Flew the coop, hey?" I commented, wondering who Von Reinstad was. A guy gets out of touch, in space. "What's this Taccon hassle all about?"

"Would you like a drink? It's a long story."

"Fine. Make it a long scotch," I grinned.

When we were settled comfortably with our glasses, he took his copy of the charter party from his desk and handed it to me. "When the ship was chartered to Malverde Oil—"

"Malverde Oil?"

"A Taccon intermediary. Malverde was to pump up the liquefied shale and sell it to Taccon, who would sell it further—Japan, I guess."

"Which company owns the converter operation?"

"Taccon. So the oil would go from Taccon to Malverde to Taccon to X—"

"And to Taccon again?"

"Eventually, with a cost jump at each level. Everything worked fine, at first. We delivered a couple cargoes to the Taccon pier, here in New Orleans—and then Taccon shut down the converter."

"Why?"

"They don't want to market the oil. The world is glutted with oil. They wanted to make sure the process worked—and then tie it up and sit on it. But they hadn't expected Von Reinstad to deliver the goods so fast—"

So Von Reinstad was the scientist-inventor.

"—and the *Holmen's* charter had a long time to run. So Malverde put us into the crude-oil ring-around-a-rosy."

"Which ring?"

"Oh, we'd pick up crude off the South American west coast, discharge it at the Balboa end of the canal, pick up more crude somebody else had discharged, carry it through the canal, discharge it at some Caribbean terminal, pick up more crude somebody else—"

"Alaskan oil routed through Japan?"

"Hell, nobody knows where the razzle-dazzle begins or ends—except Taccon. You've skippered these tank ships, Captain Schuster—you know the drill."

"Okay, so you've been ferrying crude. What came unstick?"

"Well, the old *Holmen* is just a carrier for heavy crude. She's only rated for dirty cargoes—and Taccon/Malverde have decided to put her into the higher-freight clean. They told me to dry-dock her for tank cleaning, and they sent along her next charter—high-grade refined."

"Her tanks are probably gummed a foot thick. She'll never clean up enough to pass inspection."

"Malverde says not to worry about the inspectors. But, Captain Schuster, I can't risk my Master's license trying to run a dirty rust bucket in the clean trade. I told Malverde the Company had not empowered me to break the law."

I could not help saying, "You protested too quick about the clean charter, didn't you? There's nothing illegal in dry-docking

or tank cleaning. You should have let Taccon clean our tanks at their expense—and then refused to break the relevant laws."

"Yes, I know. You could have played it that way," he said earnestly. "You've established a reputation as an honest man who enjoys leading crooks right down to the wire and pushing them over. The inspectors know you, and they'd just get a laugh out of the deal."

"But they don't know me. And the evidence of the clean charter and the impossibly dirty ship would indicate that I went along with Taccon in their hopes of diddling the inspection. I felt I had to make my own intentions clear, right at the start."

"You must realize, Captain Schuster, that you can get away with a lot of stuff the rest of us couldn't have a hope of pulling off."

As I say, somewhat inflexible and unsure. However, it's hard for a guy to make intelligent decisions when he's up to his neck in crooks. He was going on, "What bothers me most is what Taccon has done to Von Reinstad."

"Oh? What's that?"

"Well, here's a genius with a solution to the energy problem—cheap instant oil from the sea bottom, with a minimum of hardware and easy transportation. And Taccon Oil buys all legal rights and sits on them! Von Reinstad could give his blueprints away on the front page of *The New York Times*—and nobody could use them! He's being throttled!"

"Get Von Reinstad up here. His drink is already warm."

Cummings lifted his phone receiver and dialed. "Doctor? The all clear has sounded. And Captain Schuster can't stand to see a drink get warm."

He smiled, hung up, and said, "The doctor may not be himself. He stays mostly on the shale rig, monitoring the chamber and sea-bottom equipment. He's got the idea into his head that Taccon would shoot him if he wandered too far afield. I don't believe they would go to that length—they're only interested in stifling his invention—but it's an indication of his depression."

"He might talk more freely if I weren't around," continued Cummings, rising from his chair, "so I'll just go below and discuss some things with the chief engineer."

"Good idea." I swallowed a slug of scotch and waited for the inventor.

A guy whose spirit has been broken is a pathetic sight. Von Reinstad was tall, thin, gray-haired, with dark, sad eyes that should have been flashing with intensity or *schmerz* or whatever the poetic-type German flashes with. I had seen guys like him on the ships—a different breed from the chunky, roundheaded, *Achtung* blonds.

He looked relieved when I turned out to be Schuster. God knows what he had expected, after hearing Cummings talk about me. We shook hands, sat at the table, and freshened our drinks.

"Captain Cummings has been very kind," said the scientist, with the barest

trace of an accent. "I cannot stay all the time on the rig—I would go entirely crazy—so sometimes I come aboard the *Holmen*." He tamped the pipe with shaking fingers. "I have a—a monomania. I think I have been cheated—but, as Mr. Ealing says, I am just a little crazy."

"Who is Ealing?"

"He calls himself a coordinator for Malverde Oil. He is a fixer—an errand boy between Malverde and Taccon. He also keeps an eye on me and the shale rig. In case a monomaniac sabotages a useless invention."

I could see the guy wanted to talk, so I waited while he got the pipe started. He puffed it and went on, "Ealing can explain anything away. How can I think I have been cheated? I have been well paid for my invention. Taccon pays everybody very well. I am rich, almost. But, Captain, life is not all dollars and cents—"

The sentiment sounded better from Von Reinstad than from Mickleberry.

• We set down on the forward deck and walked aft to the square. A crewman pressed a switch and thick-lensed lights glowed from the darkness . . . into an enormous . . . well that went down . . . six fathoms. •

"—and I want my invention to be used, not suppressed! But Ealing says, 'Who is suppressing? There it is in plain sight—fully operable. Ready to be used when the time comes.'"

He laughed and *did* sound a little crazy. "Ready when the price comes, is what he means! Taccon is so poor, Captain, you wouldn't believe! Not even a cent profit do they get at the gas pump! But how many cents between Alaska and Japan and Taccon and Malverde and Taccon—"

"But the good they do with their profits! Research—big laboratories—laser beams—fusion-fission—solar—beautiful pie in the sky! But do they tell the truth, 'We can give you cheap energy now'? No—it must be tomorrow, when the price is high and they can squeeze and squeeze—"

"That it should happen in America—I think that makes me craziest! A free country—but who is free? Nobody who buys oil! There is no Congress—only an oil lobby! There is no president—no antitrust laws—no courts—there is only oil—oil—oil!"

"Well, there's the Silent Majority," I interposed.

"And what good is a silent majority?"

"The silence. No telegraphing punches until a haymaker sends the yappers to the canvas. Every action, you know, has its reaction. And when 200 million fed-up people finally react, Taccon Oil won't know what hit 'em."

"I hope I live to see the day!"

A snowball in hell had a better chance, but at any rate I had cheered him up. I said, "I'd kinda like to see your invention, Doctor. I don't understand how you can make an air chamber out of lines of force."

"By a shifting of molecules. The field makes a wall of solidified water."

I jingled my drink. "You mean ice?"

"Captain, 'cooking' and 'freezing' are temperature-oriented concepts. But we can 'cook' food without heat—by microwaves that induce kinetic energy. And we can solidify water without cold. Oh, the chamber walls are very elementary. And once we know how to rearrange molecular lattices in a force field, we can do many things, like liquefying shale for oil in a moment."

"And making gold from lead?"

"No, no, Captain. For that we must rearrange atomic structure, an infinitely more difficult operation. I would like to show you my shale-converter, but you must ask Mr. Ealing. I no longer own it. I am only the janitor."

"Where can I get hold of Ealing?"

"Why, I believe he was to come to the ship. Yesterday your Company told Taccon you would be arriving—"

Yeah, the fixer. I took another swallow and wondered about Ealing.

The desk phone rang. Von Reinstad rose hastily, grabbing pipe and paperback. I said, "Hey, take it easy!" but he was gone like a rearranged molecule.

I answered the phone. The watch officer said, "Captain Schuster, Mr. Ealing is here to see you."

The charter party was still on Cummings's desk. I picked it up and said, "Okay, thanks, we're ready for him."

When Ealing entered the office, I reflected that all the errand boys—the jackals—the fixers—looked alike. Cheaply sharp but shabby. They were not well paid, since double-dealing is not a rare skill that can demand good money. They were puffy eyed and always slightly hung over from the three-martini lunch. They boasted about being "in oil" or "with Taccon," and scrounged freebies, usually timing their ship visits to arrive on board at a mealtime.

Ealing was typical of the lot, perhaps a little more stupid. He lunged into the office with a show of self-confidence and gave me a clammy handshake. "Good to have the Old Man aboard. Your young skipper ain't dry behind the ears."

"Yeah—but Taccon could've gone ahead and cleaned the tanks, anyhow."

"We should clean tanks for the Company? You're a real gas, Captain." He helped himself to Cummings's "repre-

sensation" booze and joined me at the table. "Why all the hoo-hah about a rerating? Tankers go from dirty to clean, every day in the week."

"When they're in a condition that can be cleaned up enough to pass inspection, sure. It's how the *Holmen* will be rerated that concerns the Company."

"Not anymore. As the charterer, Taccon determines how the ship will be used."

"Yeah." I scanned the fine print confidently, knowing Mickleberry had put it together. "As long as the ship is used for the specific purpose of carrying dirty cargoes."

"Our lawyers can talk to your lawyers."

"Nuts. All we have to do is call the tank inspectors and blow the whistle."

He gave me a fishy grin. "You'll never make a million, Captain, if you take that attitude."

"Life is more than dollars and cents." I folded the fine-print pages. "Mr. Ealing, before I fly back to New York, I'd like to see Dr. Von Reinstad's invention."

"Sure. Let me check with the Taccon dispatcher. There's always a tanker heading past the rig, on her way out from the New Orleans terminal."

"How about a helicopter?"

He hesitated, and the corners of his mouth blanched. He did not like helicopters. But he said, "Okay. At the Taccon pier, tomorrow morning. Is the old gink coming along?"

"You view Dr. Von Reinstad as an old gink?"

"He's as dumb as they come. He invents a do-it-yourself oil-extractor that would knock the bottom out of oil prices, and he sells it to Taccon!" Ealing laughed heartily. "And he sells it to Taccon!"

The next morning Von Reinstad and I met Ealing at the Taccon pier. The physical plant was neat and pollution free, just like in the ads. It might have been a cover off the old *Saturday Evening Post*.

A twelve-man chopper flew us out with several maintenance crewmen. From the air, the shale rig looked like the deck of a flattop, except it seemed to rest upon the wave surface and had a large dark square in the center.

We set down on the forward deck and walked aft to the square. A crewman pressed a switch, and thick-lensed lights glowed from the darkness. I was looking into an enormous, glossy-sided well that went down about six fathoms, to assorted hardware on the sea bottom.

Below deck on the rig were two galleries leading to what I assumed were control rooms and living quarters.

"Everything is submarine and self-contained," explained Dr. Von Reinstad.

"Yeah, but if your force-field walls collapse, you'll be flooded out!" I objected.

"No, Captain," he smiled. "The sections are like space capsules. But for backup security, a watertight hatch cover closes between the chamber and the sections."

"I hope you get the guys out of the chamber before you slam the hatch cover shut!"

"It closes automatically. This is a robot operation. Only rarely is a human being in the chamber—myself—or a visiting fireman," he smiled. "Shall we descend to the bottom?"

"Not me!" said Ealing. "I don't trust these nothing-can-go-wrong robot operations! A fuse blows—and you've had it!"

"Oh, no, Mr. Ealing," insisted the inventor. "I really can't visualize what could fail. In a storm, yes, perhaps—the hatch cover is a storm precaution—"

I was willing to take Von Reinstad's word for the safety of the chamber. Every time I blasted off from Canaveral in a space-mining shuttle, I was taking a scientist's word that nothing would fail. And, so far, nothing had failed.

Von Reinstad and I climbed down the gallery ladders to a small lift platform and took the lift to the dried-mud sea bottom.

Well, the converter said nothing to me. I saw it could be moved on caterpillar treads as the shale was stripped. Presumably the whole "flatop" could be shifted around.

I saw also that the chamber had a pumping system similar to a dry dock. Naturally, after the water wall had solidified, the enclosed water would have to be removed.

I touched the wall. It was solid. My fingers stuck to it and seemed white burned when I took them away. I commented, "Yeah, you really have something here."

He smiled, "I will show you the control console, Captain."

We ascended to the lower gallery. Von Reinstad lifted a long, horizontal panel and showed me what seemed to be several zillion microelectronic components.

Only one small section made a recognizable pattern, like a pegboard with little gray pegs. I asked, "What part do the pegs control?"

In an unconsciously proud gesture, he brushed his hand over the pegs. "They determine how the molecular lattices block each other—like a basket woven so tightly that it holds water."

"Suppose a peg was defective."

"They are pretested and are thereafter permanent. If a peg were to be removed," he speculated thoughtfully, "the blockage would be incomplete, and leaks would occur—the extent of the damage depending, of course, on the peg position."

He should not have left the controls so casually unlocked, even though the converter had been shut down—and the rig-maintenance staff would no more fool with the controls than they would lift up the hood of a friend's car and start poking and prying. Any unattended control system is bound to give an ingenious bastard ideas.

It had given me one beaut of an idea how to get the converter rights back for Dr. Von Reinstad.

After lunch in the upper-gallery mess

room, I asked Von Reinstad if I had permission to descend alone.

"Of course, Captain."

"Got a walkie-talkie?"

"Yes, we have minicomunicators, Captain."

He gave me a powerful little box. I put it in my pocket, descended on the lift, and tramped mysteriously around the sea bottom. I squinted up now and then to see Ealing watching me from the top gallery. When I had him on the hook, I ascended to the gallery, laughing to myself.

"What did you find down there?" he demanded.

"Taccon would have a fit if they knew!"

I ambled away. Out of the corner of my eye I could see Ealing work up his courage and descend.

I nipped into the control room. The panel was still lifted. I carefully wiggled a center peg loose. If lights flashed and bells rang, the deal was off.

Nothing happened—but the peg was definitely out of contact. Apparently emergency procedures were triggered by the sea-bottom robot.

I legged it to the platform, called the lift back up from the mud, and descended.

Ealing was retramping my footsteps. He said, "I don't see anything."

"Naturally not. Metals are difficult to recognize. We learned that in the asteroids."

"The geologists didn't find anything down here but shale."

"They were only looking for shale—and the place is lousy with molluskite, the rarest earth there is! And you thought Von Reinstad was crazy, hanging around the rig! All he's waiting for is for you guys to go away and leave him alone!"

"I don't see anything—oh, God, look at the wall! It's wet!"

"Condensation."

"It's running down, all over! Let's get out of here!"

Ealing stampeded to the lift. I plowed through ankle-deep water and jumped aboard as he sent the lift upward.

Far above, a siren wailed—and the automatic hatch slid shut. Pumps began thumping.

We came to a stop short of the closed hatch. The communicator was buzzing. I took it from my pocket, clicked it on, and held it to my ear. Von Reinstad said, "Captain! Are you and Ealing all right?"

"Yeah, we're on the lift. How long will it take?"

Quickly, I blanked Von Reinstad's reply and continued talking to myself. "That so? I understand. How many days—?"

"Days!" Ealing was shaking me. "What did he say about days?"

I returned the communicator to my pocket. "Well, Von Reinstad's kinda short on spare parts—didn't bother, with the hardware shut down—"

"They can fly out spare parts!"

"It ain't all that simple. You oughtta understand, being familiar with Taccon/Malverde operations. I mean, you guys

can't afford to sell Alaskan oil to Americans, when you've got all that Arab oil to get rid of. So you sell Alaskan oil to Japan—and bring Indonesian oil to the Canal—and sell it to Taccon—and Taccon brings Peruvian oil to the Canal and sells it to Malverde—"

"What's that got to do with—?"

"Well, it's the same in electronics. A daisy chain, like. Now, the molecular calitran is manufactured in Boston and then flown to Japan for the microdigital and then returned to Boston for inspection before being sent to Seattle for the toggle splint—"

"But there must be other manufacturers!"

"Well, yeah, but like Oil, they're all playing patty cake in the same cartel. An outfit in St. Petersburg makes the same calitran, but they send it to Hong Kong for the microdigital and Sydney for the toggle splint—"

"But the water is pouring in! The pumps can't handle it! We'll drown! For God's sake, get them to break the daisy chain!"

"Break the daisy chain?" I took a deep breath. "Yeah, go ahead and scream 'Break the daisy chain,' you goddamned son of a bitch! In the bad winters of '76 and '77 Americans froze to death while the oil cartels played with their daisy chains and laughed all the way to the bank!"

"Stop talking—and do something!"

The water was rising pretty fast. I said, "Maybe, if we could make it worth Von Reinstad's while—" I took out my notebook and pencil and scribbled, "On behalf of Taccon Oil and their intermediaries and subsidiaries, I hereby return to Dr. Von Reinstad all rights in his air chamber and shale-converter." I held up the notebook, "Sign this."

Ealing peered at the page in the wavy light from water-distorted lamps. "But I don't have any authority to sign such a statement!"

"You seem to have plenty of authority to deal under the table."

"No agreement signed under duress is any good!"

"Your lawyers can talk to our lawyers."

He signed. I tucked the notebook away, took the communicator from my pocket, and snapped it on. "Doctor?"

"Schuster! Thank God! We're checking—"

"Relax. The only thing wrong is—"

Ealing grabbed the communicator and yelled, "I signed! I signed! Get the parts—!"

He was like a wild man, shaking and sobbing. The communicator spurted from his hands, plopped into the rising water, and disappeared.

Well, there went the old ball game. About a zillion microscopic parts to test out—

Ealing was still raving. "Damn you, Schuster! I'll drown you first!"

My mind was on some way of tapping a Morse message on the hatch cover, and I was not paying attention. Ealing lunged against me and pushed me from the lift.

I fell on my back, hitting the water hard. The last thing I remembered was the sight of the hatch rolling back—

"You see, Captain," smiled Von Reinstad,

"Cummings had described you to me—how you played tricks and beat crooks at their own game. So when I heard you say 'Relax,' and Ealing talking about signing something, I knew you had tricked him with the wall, and I went immediately to the pattern board that had interested you. I began testing—and as soon as the wall solidified again, we could open the hatch."

"I still say your emergency system works ass-backwards," I growled.

The rig crew had brought me up before I had gone down for the third time. My back was sore and stiff, and I felt waterlogged, but I was okay, and the cook had dried my clothes (by caloric, not kinetic, energy).

He had also dried the contents of my pockets, and I handed the blurred scrap of paper to Von Reinstad. He read it and smiled. "Thank you, Captain—but Ealing has already explained that the signature is not legal."

"True. But fortunately for you, Dr. Von Reinstad, we are not living in a country of

*• Ealing stampeded to the lift.
I plowed through
ankle-deep water and jumped
aboard as he sent
the lift upward. Sirens wailed
—and the automatic
hatch slid shut. •*

laws but of government by media pressures. Now, what you should do is hire a good PR expert. He will build a campaign on the fact that *utilization* is implied in the purchase of any invention, unless the contrary is explicitly stated. You naturally assumed Taccon would put your invention into full operation. Since this was not done, the deal is null and void."

"But—?"

"As recognition of this fact," I went on, "Mr. Ealing, in remorse and wanting to make restitution before what seemed inevitable death, gave back your invention."

"The courts—?"

"The case will never go near a court. Your PR expert will sway public opinion to your side. He'll make you an effectively organized minority. Enraged sympathizers will stone Taccon gas pumps and loot Taccon stations. Anybody who speaks against you or mentions legal action will be viciously smeared and silenced. And Taccon will have to give in or be vandalized out of business. As Mickleberry says, if you can't beat the media-nourished tyrants, join 'em."

Von Reinstad's poetic eyes flashed—

with amusement. "No, Captain, you have already shown me where I belong—with the Silent Majority. You took away my bitterness when you made me realize I was not standing alone. Two hundred million are all around me, standing firm. And in a few years, the oil cartels will have gone to join the manufacturers of buggy whips."

I was glad he had got over his frustrated depression, but I knew Big Oil would be around for a long while yet.

Ealing stayed aboard the rig. I felt he would not leave until he had conned the paper out of Von Reinstad, and I hoped the inventor would not give it up.

I flew back to the Taccon terminal that evening. Someone on the rig had tipped off the media to the "accident," and a gang with recorders was waiting for me.

I guess it struck me the wrong way—the surface slickness of the Taccon operation and the ring-around-a-rosy buildup of costs. When the media asked me to comment, I blew my stack. I reviewed the whole record and went on, "Sure, the oil cartels are experimenting with other energy sources—to monopolize them as they've monopolized oil. In twenty years a person with solar panels on his roof or a windmill in his backyard will pay more for sunlight and wind than he pays for oil! I tell you—"

I told them, all right. I got the whole thing off my chest. When I had run down, the media persons clicked off their recorders, said, "Thank you, Captain Schuster!" and ran for their cars.

I taxied back to the *Holmen* and slept like a top. The next morning I caught an early jet to New York. I did not bother to read a newspaper or look at a TV screen. I knew what I had said—and I felt truer words had never been spoken.

Of course, I had shot my "low profile" all to hell. My severance pay would be waiting for me. I went directly to the Company offices from the airport.

The Operations floor was quiet. I could not understand it. At least a few of my old pals would be giving me a grin and a wisecrack. But Operations hummed along as if it were just another day and I were making a routine visit.

I left my suitcase with the receptionist and was admitted into Mickleberry's office. I squared my shoulders as I walked toward his desk.

He looked up, smiled what he thought was his approving smile, and offered me his hand. I took it, muttered something, and sank into the worn old chair. He said, "Taccon is keeping the *Holmen* in the crude-oil trade—and Captain Cummings will stay aboard. Your usual smooth, efficient work, Captain Schuster."

I felt completely flummoxed. "Then you're not sore about the interview I gave last night?"

"Interview? What interview?" He raised his eyebrows and seemed genuinely surprised. "No interview was reported—anywhere—Captain Schuster." ☐



When Dawson got back from his vacation in Florida, he was feeling no better. He hadn't expected a miraculous cure. In fact he hadn't expected anything. Now he sat morosely at his desk, staring out at the tower of the Empire State and vaguely hoping it would topple.

Carruthers, his partner in the law firm, came in and bummed a cigarette. "You look lousy, Fred," he remarked. "Why not go out and have a drink?"

"I don't want a drink," Dawson said. "Besides, it's too early. I had enough liquor in Florida."

"Maybe too much."

"No. What griped me was—I dunno."

"Great psychoses from little acorns grow," Carruthers said, his plump, pale face almost too casual.

"So now I'm nuts?"

"You could be. You could be. Give yourself time. Why this abnormal fear of psychiatrists, anyway? I got psychoanalyzed once."

"What happened?"

"I'm going to marry a tall, dark woman," Carruthers said. "Just the same, psychiatry isn't in the same class with astrology. Maybe you bit your grandmother when you were a child. Drag it out in the open. As long as you keep thinking, 'What big teeth you have,' you'll dwell in a morass of mental misery."

"I'm not in a morass," Dawson said. "It's just—"

"Yeah. Just—Listen, didn't you go to college with a guy named Hendricks?"

"I did."

"I met him in the elevator last week. He's moved here from Chicago. Got offices upstairs, on the twenty-fifth floor. He's supposed to be one of the best psychiatrists in this country. Why not go see him?"

"What could I say?" Dawson asked. "I'm not followed by little green

THE CURE

BY LEWIS PADGETT

PAINTING BY MICHEL HENRICOT

men."

"Lucky man," Carruthers said. "I am. Day and night. They drink my liquor, too. Just tell Hendricks you smell dead flies. You probably pulled the wings off an anopheles when you were a tot. It's as simple as that, see?" He rose from his chair, put his hand on Dawson's shoulder and added quietly, "Do it, Fred. As a favor to me."

"Um. Well—O.K."

"Good," Carruthers said, brightening. He looked at his wristwatch. "You're due at his office in five minutes. I made the appointment yesterday." He fled, ignoring the curse Dawson flung at his head. "Room twenty-five-forty," he called, and slammed the door.

Scowling, Dawson located his hat, left word with the receptionist as to his whereabouts and rode the elevator up. He met a short, fat, cherubic man in tweeds emerging from twenty-five-forty. Mild blue eyes considered him through glistening contact lenses.

"Hello, Fred," the man said. "Don't know me now, eh?"

"Raoul?" Dawson's voice was doubtful.

"Right. Raoul Hendricks, somewhat fatter after twenty-five years, I'm afraid. You look the same, though. Look, I was just going down to your office. I didn't have a chance to eat breakfast this morning. What about a bite downstairs?"

"Didn't Carruthers tell you—"

"We can kick that around better over food," Hendricks steered Dawson back to the elevator. "There's a lot I want to ask you about. The college chaps. I didn't keep in touch. I was in Europe most of the time."

"I kept in touch," Dawson said. "Remember Willard? He's just been indicted in an oil mix-up—"

They talked over onion soup and through the entrée. Hendricks listened, mostly. Sometimes he watched Dawson, though not pointedly. They were in an isolated booth, and, after coffee had been served, Hendricks lighted a cigarette and blew a smoke ring.

"You want a snap diagnosis?" he asked.

"O.K."

"You're worried about something. Do you know what it is?"

"Certainly I know," Dawson said. "It's a sort of daydream. But Carruthers told you that."

"He said you smelled dead flies."

Dawson laughed. "On a windowpane. A dusty windowpane. Probably it isn't that at all. I just got the impression, no more than that. I never see anything. It's a sort of extension of sensory consciousness."

"It never occurs in your sleeping dreams?"

"If it does, I don't remember. It's always a flash. The worst part is that I know at the time that it's the windowpane that's real. Usually it happens when I'm doing some routine stuff. Suddenly I get this flash. It's instantaneous. I feel, very certainly, that whatever I happen to be doing at the time is

a dream. And that really I'm somewhere smelling dead flies on a dusty windowpane."

"Like the Red King? You think somebody's dreaming you?"

"No. I'm dreaming—this," Dawson looked around the restaurant.

"Well," Hendricks said, "possibly you are." He stubbed out his cigarette. "We get into metaphysics at that point, and I'm lost. It doesn't matter which is the dream. The main thing is to believe in the dream while you're having it. Unless it's a nightmare."

"It isn't," Dawson said. "I've had a pretty good life so far."

"Then where are we? You don't know what's worrying you. The dream's merely a symbol. Once you realize what the symbol represents, the whole structure collapses, and any neuroses you may have are gone. As a general rule, anyway."

"Ghosts can't stand light, is that it?"

"That's it, exactly. Don't misunderstand me. Neuroses can build up eventually to

*• He knew he was lying close
against it, his
nose almost touching the glass,
inhaling dust with every
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dreary, somehow
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was singularly horrid... •*

true psychoses. You've got something like an olfactory hallucination. But there's no accompanying delusion. You know the windowpane isn't there."

"Yeah," Dawson said, "but there's something under my hand."

"Tactile hallucination? What does it feel like?"

"Cold and hard. I don't know what it is. If I move it, something will happen."

"Do you move it?"

After a long moment, Dawson said, "No," very softly.

"Then move it," Hendricks advised. He took out pencil and paper and adjusted his watch. "Let's have a jury-rigged word-association test. O.K.?"

"Well—why?"

"To find out the causation of your windowpane. If there's a mental block, if the censor's working, it'll show up. Spring cleaning. If you clean a house regularly, you save a lot of work later. No chance for cobwebs to accumulate. Whereas if you let the stuff pile up, you're apt to get a real psychosis, with all the trimmings. As I just said, it's a question of finding the cause. Once you locate that, you know it's a straw

dummy, and it doesn't bother you any more."

"What if it isn't a straw dummy?"

"Then, at least, you've recognized it, and can take steps to get rid of the incubus."

"I see," Dawson said slowly. "If I'd been responsible for a man's death years ago, I could buy peace of mind by taking care of his orphaned children."

"Read Dickens," Hendricks said. "Scrooge is a beautiful case history. Hallucinations, persecution complex, guilt complex—and atonement." He glanced at his watch. "Ready?"

"Ready."

When they had finished, Hendricks blinked at the results. "Normal," he said. "Too normal. A few odd quirks—but it takes more than one test to get any definite result. We don't want to be empirical—though it's sometimes necessary. Next time you have that daydream, move the gadget under your hand."

"I don't know if I can," Dawson said.

But Hendricks only laughed. "Neural paralysis of the astral," he suggested. "I'm relieved, Fred. I'd rather gathered you were slightly off your rocker. But the layman always overestimates mental quirks. Your friend Carruthers has probably got you a bit worried."

"Maybe."

"So you've got a hallucinatory daydream. That isn't uncommon. Once we find the cause, you'll have nothing left to worry about. Come in tomorrow, any time—give me a call first—and we'll give you a physical checkup. More coffee?"

"No," Dawson said, and presently left Hendricks at the elevator. He was feeling irrationally relieved. Though he discounted a good deal of the psychiatrist's professional optimism, he felt that the man's argument held water. There was logic in it. And certainly it was illogical to let a daydream influence his moods so strongly.

Back in his office, Dawson stood at the window, staring out over the serrated skyline. The low, hushed roar of traffic mounted from the canyons below. In forty-two years he had come a long way, partner in a law firm, member of a dozen clubs, taking an active interest in a variety of matters—a long way for a boy who had begun his career in an orphan asylum. He had married once, but there had been a divorce, amicable on both sides. Now it was more convenient to maintain a bachelor apartment near Central Park. He had money, prestige, power—none of which would help him if the hallucination developed.

On impulse he left the office and visited a medical library. What he found only confirmed Hendricks' remarks. Apparently, as long as he didn't believe in the real existence of the dusty windowpane, he was fairly safe. When he did, dissociation stepped in, and all but subjective, false logic would fail. Men have a vital need to believe they are acting rationally—and,

since so many basic motives are too hidden and complicated to unscramble, they assign arbitrary meanings to their actions. But why a dusty windowpane?

"Yeah," Dawson thought, thumbing through pages. "If I believed in this dream, I'd—uh—erect secondary delusions. I'd think of a good reason why there was a windowpane. Only there isn't any reason, luckily."

As he walked out of the library and saw the stream of street traffic before him, he suddenly felt that he was dreaming. And the windowpane was back again.

He knew he was lying close against it, his nose almost touching the glass, inhaling dust with every breath, and the smothering, dreary, somehow brownish odor of dead flies. It was singularly horrid—that feeling of suffocation and dead despair. He could feel the hard something under his hand, and he knew with a sudden sense of urgency that unless he moved it—now—he was more than likely to smother there with his nose against the glass, smother from sheer inertia, inability to move. He knew he must not slip back into the dream of being Dawson. This was reality. There was nothing tangible about Dawson and his fool's paradise and his dream city of New York. Yet he could lie here and die with the smell of dead flies in his nostrils, and Dawson would never suspect until that dreadful last moment between waking and death, when it was too late to move the— the hard object beneath his hand.

Traffic roared at him. He stood at the curb, white and sweating. The unreality of the scene before him was briefly shocking. He stood motionless, waiting until the hollow world had resumed its tangibility. Then, his lips tight, he hailed a taxi.

Two stiff shots of whiskey were comforting. He was able to contemplate working on the current brief, a liability case which presented no difficulties. Carruthers had gone to court, and he didn't see his partner that afternoon. Nor did the—hallucination—recur.

But, after dinner, Dawson telephoned his ex-wife, and spent the evening with her at a roof garden. He didn't drink much. He was trying to recapture something of the vital reality that had existed during the early part of their marriage. But he wasn't too successful.

The next morning Carruthers came in, perched on Dawson's desk and cadged a cigarette. "What's the verdict?" he wanted to know. "Do you hear voices?"

"Often," Dawson said. "I'm hearing one now. Yours."

"But is Hendricks any good, really?"

Dawson felt unreasonably irritated. "Do you expect him to wave a magic wand? All therapy takes time."

"Therapy, huh? What did he say was wrong?"

"Nothing much." Dawson didn't want to discuss it. He opened a law book pointedly. Carruthers lit his cigarette, dropped the

match into the wastebasket and shrugged.

"Sorry. I'd thought—"

"Oh, I'm all right. Hendricks is pretty good, really. My nerves are a bit shot."

Comforted, Carruthers said something and went back to his office. Dawson turned a page, read a few words and felt things close in. The morning sunlight, slanting through the window, faded abruptly. Under his hand was a cold, hard object, and strong in his nostrils was the dusty smell of despair. And this time he knew it was reality.

It did not last long. When it had gone, he sat quietly, staring at the hollow desk and the hollow wall beyond it. The sounds from the traffic below were dream noises. The curl of smoke spiraling up from the wastebasket was dream smoke.

"I hope you don't think you're real," Tweedledum said scornfully.

He noticed that the smoke had changed to orange flame. The curtain caught fire. Presently he would waken.

Someone screamed. Miss Anstruther, his secretary, stood in the doorway, pointing. After that there was confusion, shouting and the spurting of a fire extinguisher.

The flames died. The smoke vanished.

"Oh, dear," Miss Anstruther said, wiping a smudge from her nose. "It's lucky I came in when I did, Mr. Dawson. You had your nose in that book—"

"Yeah," Dawson said. "I didn't even notice. I'd better speak to Mr. Carruthers about throwing matches in the wastebas-

kets."

Instead, he telephoned Hendricks. The psychiatrist could see him in an hour. Dawson passed the time with a crossword puzzle, and, at ten, went upstairs and stripped. Hendricks used stethoscope, blood-pressure gadget and other useful devices.

"Well?"

"You're all right."

"Sound as a nut, eh?"

"A nut?" Hendricks said. "Come on. Let's have it. What happened?"

Dawson told him. "It's like epilepsy. I don't know when I'll have these attacks. They've never lasted long so far, but they might. And afterward—the dream feeling hangs over. I knew very well that there was a fire in the wastebasket, but it wasn't a real fire."

"Daydreams are apt to carry over a bit. Reorientation isn't always instantaneous."

Dawson chewed on a fingernail. "Sure, but—suppose Carruthers was falling out of a window. I wouldn't have tried to stop him. Hell, I'd have walked off a roof myself. I'd have known it wouldn't have hurt me. It's a dream."

"Do you feel you're dreaming now?"

"No," Dawson said, "not now, of course! It's only during these attacks, and afterward—"

"You felt that hard object under your hand?"

"Yeah. And the smell. There was something else, too."



"What?"

"I don't know."

"Move that object. It's a compulsion, in four-bit words. And don't worry about it."

"Not even if I walk off a roof?"

"Stay away from roofs for a while," Hendricks said. "Once you find out the meaning of this symbolism, you'll be cured."

"And if I don't, I'll get secondary delusions."

"You've been reading up on it, eh? Look. If you think you're the richest man in the world, and you haven't got a dime in your pocket, how'll you rationalize that?"

"I don't know," Dawson said. "Maybe I'm eccentric."

Hendricks shook his head, his plump cheeks bobbing. "No, you'll develop the logical delusion—a supplementary one—that you're the victim of an organized plot to rob you. Catch? Don't try to assign phony meanings to your dusty windowpane. Don't start thinking a little man named Alice is popping out of the woodwork with a windowpane tucked under his arm. Or that the glassblowers' union wants to persecute you. Just find the real meaning behind the symbolism. As I told you. Move that gadget under your hand. Don't simply be passive about it."

"O.K.," Dawson said. "I'll move it. If I can."

He dreamed that night, but it was a typical dream. The familiar hallucination didn't

emerge. Instead, he found himself standing on a gibbet, a rope about his neck. Hendricks came rushing up, waving a paper roll tied with a blue ribbon. "You're reprieved!" the psychiatrist shouted. "Here's your pardon, signed by the Governor!" He thrust the roll into Dawson's hands. "Open it," he ordered urgently. "Untie the ribbon." Dawson didn't want to, but Hendricks kept insisting. He pulled at the ribbon. As he did, he saw that it was tied to a long cord that snaked across the platform and vanished from sight beneath it. A bolt clicked. He felt the trap door quiver under his feet. By pulling at the ribbon, he had opened the drop; he was falling.

He woke up, sweating. The room was dark and silent. Cursing under his breath, Dawson got up and took a cool shower. He had not had nightmares for years.

There were, after that, two more interviews with Hendricks. Each time the psychiatrist probed more deeply. But the refrain never altered. *Recognize the symbol. Move your hand. Remember.*

On the third day, as Dawson sat waiting in Hendricks' outer office, he remembered.

The familiar, leaden, sick inertia swept over him. Desperately he tried to focus on the buildings outside the window. But he could not battle the tide. At the last moment, Hendricks' advice occurred to him, and, as he felt the cold, hard object under his palm, he made a tremendous effort to move his hand.

To the left, something told him. To the left. It was hard to battle that lethargy, that smothering, dusty suffocation of despair. And it was hard to move. But he strained to send the impulse down his arm, into stiff fingers, and the effort told. He felt something click into place, and—and...

He remembered.

The last thing before...

Before what?

"Vital therapy," a voice said. "We grow fewer yearly. And we must guard against that plague."

Karestly ran an eight-fingered hand over his sweating, bald head. "The tests show you need it, Dawsao."

"I hadn't—"

"You wouldn't know, of course. It'd be imperceptible except by the instruments. But you need the therapy, that's certain."

"I can't spare the time," Dawsao said. "The simplification formulas are just beginning to clear up. How long must I stay in the vorkyl?"

"Half a year," Karestly said. "It doesn't matter."

"And Pharr went in last month."

"He needed it."

Dawsao stared at the wall, made a mental signal, and opaqueness faded to translucence and transparency. He could see the City.

Karestly said, "You've never vorkyled before. You're one of the youngest. It isn't bad. It's stimulating, curative and necessary."

"But I feel normal."

"The machines don't lie. The emotion factor is wrong. Listen to me, Dawsao. I'm a great deal older than you, and I've been in the vorkyl twelve times."

Dawsao stared. "Where to?"

"Different eras each time. The one best fitted for my particular warp. Once it was Brazil, in 1890. Another time, Restoration London. And the Second Han Empire. I had plenty to do. I spent ten years in Brazil, building a rubber empire."

"Rubber?"

Karestly smiled. "A substance—it was important at the time. I kept busy. It's fine therapy. In those days the only therapy they knew involved painting, construction—visual and tangible, not the emotional and psychic therapy we use. However, their minds weren't developed."

"I hate the idea of being shut up in a five-sensed body," Dawsao said.

"You wouldn't know any better. There's the artificial mnemonic angle. Your life-force will take possession of the body that's created for you at the therapeutic epoch we choose, and you'll have a full set of false memories, created especially for that period. You'll probably begin as a child. There may be temporal compression, so you'll be able to live thirty or forty years in a half year of our time."

"I still don't like it."

"Time travel," Karestly said, "is the best therapy known today. You live in a new envi-



ronment, with a new set of values. And that's the vital part. You get away from the current herd instinct that's caused all the trouble."

"But—" Dawsao said. "But! Only four thousand of us still sane, in all the world! And unless we work fast—"

"We're not immune. The whole trouble is that for hundreds of generations the race has followed false values, which conflicted with the primary instincts. Overcomplication plus oversimplification, both in the wrong places. We haven't kept pace with our growing mentality. There was a man—Clemens—who owned a mechanical typesetter that was perfect except for one thing. It was too complicated. When it worked, it was ideal, but it kept breaking down."

"Old stuff," Dawsao said. "I know the trouble. The machines are so enormously complicated now that humans can't keep up with them."

"We're solving it," Karestly said. "Slowly but surely. There are four thousand of us. And we know the right therapy now. After you've had six months in the vorkyl, you'll be a new man. You'll find temporal therapy is foolproof and absolutely certain."

"I hope so. I want to get back to my work."

"If you went back to it now, you'd be insane in six months," Karestly pointed out. "Temporal travel is like preventive serum shots. You'll be occupied; we'll send you back to the twentieth century."

"That far back?"

"That period's indicated, in your case. You'll be given a complete set of artificial memories, and, while you're in the past, you'll have no consciousness of reality. Of this reality, I mean."

"Well..." Dawsao said.

"Come on," Karestly rose and floated toward the transporter-disk. "The vorkyl's ready for you. The matrix is set. All you have to do is—"

Dawsao got into the case. It closed behind him. He took a last look at Karestly's friendly face and tightened his hand on the control. He moved it toward the right.

Then he was Fred Dawson, with a complete set of artificial memories, in the orphan asylum in Illinois.

But now he lay in the vorkyl, his nose against dusty glassocene that smelled of dead flies, and the vitiated air tore at his throat as he tried to breathe. All was in gray semidarkness around him. He sent out a frantic thought-command.

Somewhere light grew. The distant wall faded to transparency. He could see the City.

It had changed. It was older. And a heaped pile of dust made a canopy atop the vorkyl in which he rested.

The immense, red sun washed the City in bloody gloom. There was no sign of organized activity. Figures moved here and there in the ruins. He could not make out what they were doing.

He looked for the Administration Build-

ing, the last stronghold of the race. It had altered, too. A long time must have passed since he had entered the vorkyl. For ruin had touched the great tower, and the white, naked shapes that crawled up and down the structure showed no sign of intelligence. The last light had gone out, then. The tide of madness had engulfed the four thousand.

He used his seventh sense of perception, and his guess was confirmed. In all the world, there was no sanity. The herd instinct had triumphed.

And he could not breathe. That suffocating horror was a reality now. The last oxygen left in the sealed case was rapidly being absorbed by his now-active lungs. He could, of course, open the vorkyl—

To what?

Dawsao moved his hand. The control swung to the right again.

He was sitting in the psychiatrist's outer office. The receptionist was at her desk, scribbling something; she didn't look at him. The white light of morning sunshine made patterns on the rug.

The reality—

"You may go in now, Mr. Dawson."

Dawson stood up and walked into Hendricks' sanctum. He shook hands, muttered something and sank into a chair.

Hendricks referred to his charts.

"O.K., Fred," he said. "Feel up to another word-association test? You're looking a bit

better."

"Am I?" Dawson said. "Maybe I know what the symbol represents now."

Hendricks looked at him sharply. "Do you?"

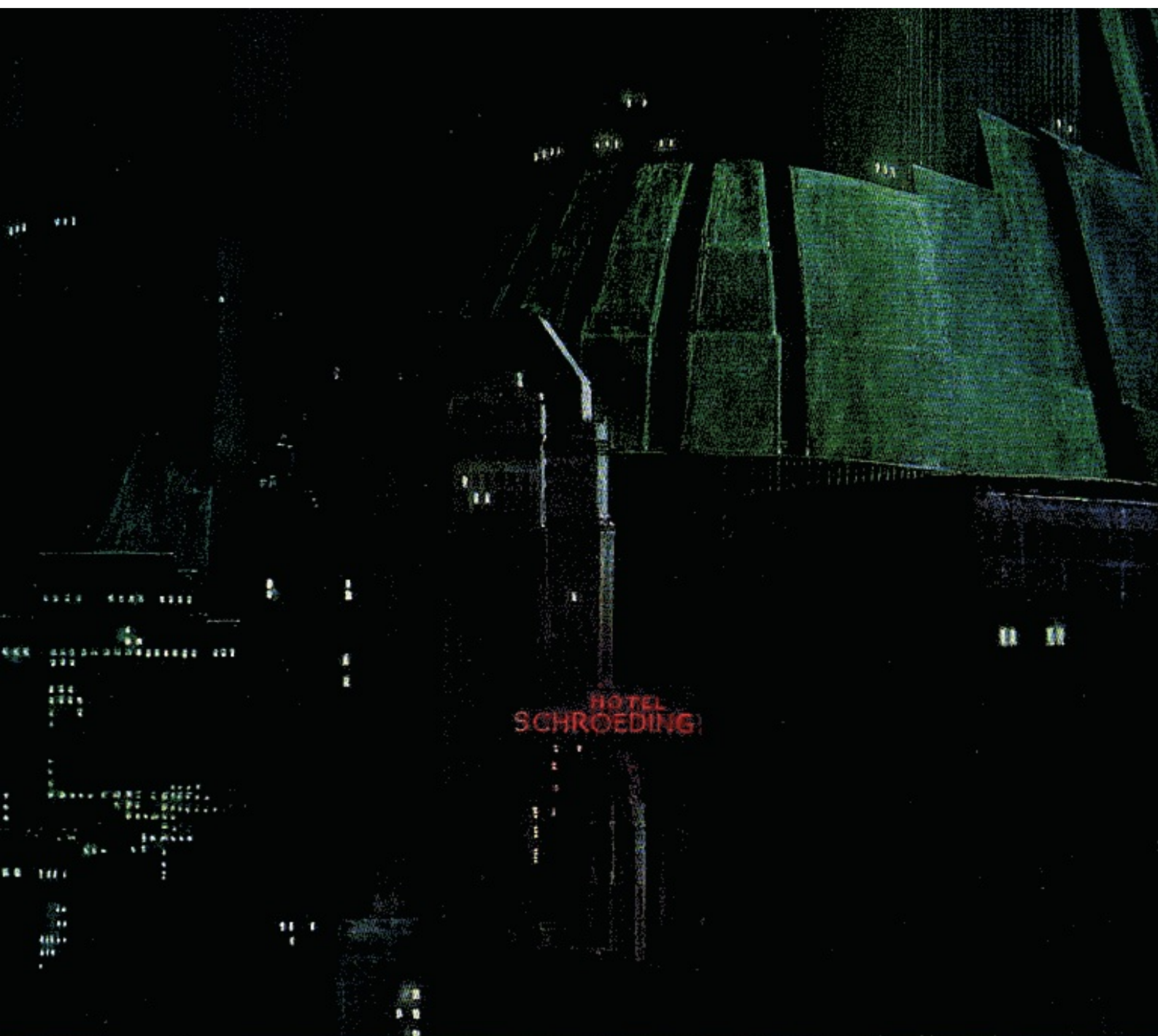
"Maybe it isn't a symbol at all. Maybe it's a reality."

Then the familiar sensation came back, the dusty, suffocating claustrophobia, and the windowpane, and the brownish, dry smell, and the sense of terrible urgency. But there was nothing to be done about it now, nothing at all. He waited. In a moment it was gone again, and he looked across the desk at Hendricks, who was saying something about the danger of secondary delusions, of rationalizing.

"It's a matter of finding the right sort of therapy," insisted the hollow man. ∞

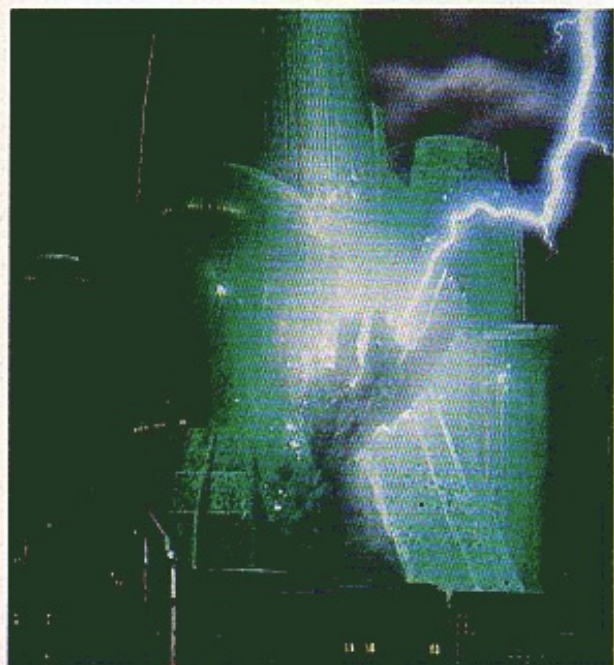
Veteran SF fans will happily remember Lewis Padgett's byline from the pulp-magazine era of the forties and fifties. Actually he was only one of at least seventeen different pseudonyms used by the late great Henry Kuttner and his equally gifted wife and collaborator, C. (for Catherine) L. Moore. Together and separately they produced a significant body of literary works in the fantasy and SF genre. So close was their collaboration that, in most of their stories, it is impossible to know which of them wrote what. The Cure, one of his and/or her best stories, first appeared in 1945 in Astounding Science Fiction.







White spots danced in front of our eyes, there was a momentary sensation of vertigo, and then we had emerged from subspace. Our trusty ship, *Endeavor*, powered by its twin GM distractors, had taken us safely from our own universe to GG233, a universe tangential to us in subspace directionality. Our party had gone there to look at some of the greatest structures ever built. A universe, by definition, is infinite, but some infinities are larger than others. GG233 is a relatively small universe. This does not, however, prevent it from having some of the largest fabricated structures in the entire megaverse. Our first stop was the planet Gropetz V, where we stayed at the Hotel Schroeding, right next door to the Combined Galactic Churches building. No fewer than 18,567 deities are worshiped in this immense edifice. The combined prayer power of the 483,000 beings who worship here



ORDERS OF MAGNITUDE

A survey of megastructures in the universe GG233

PAINTINGS BY JOHN HARRIS



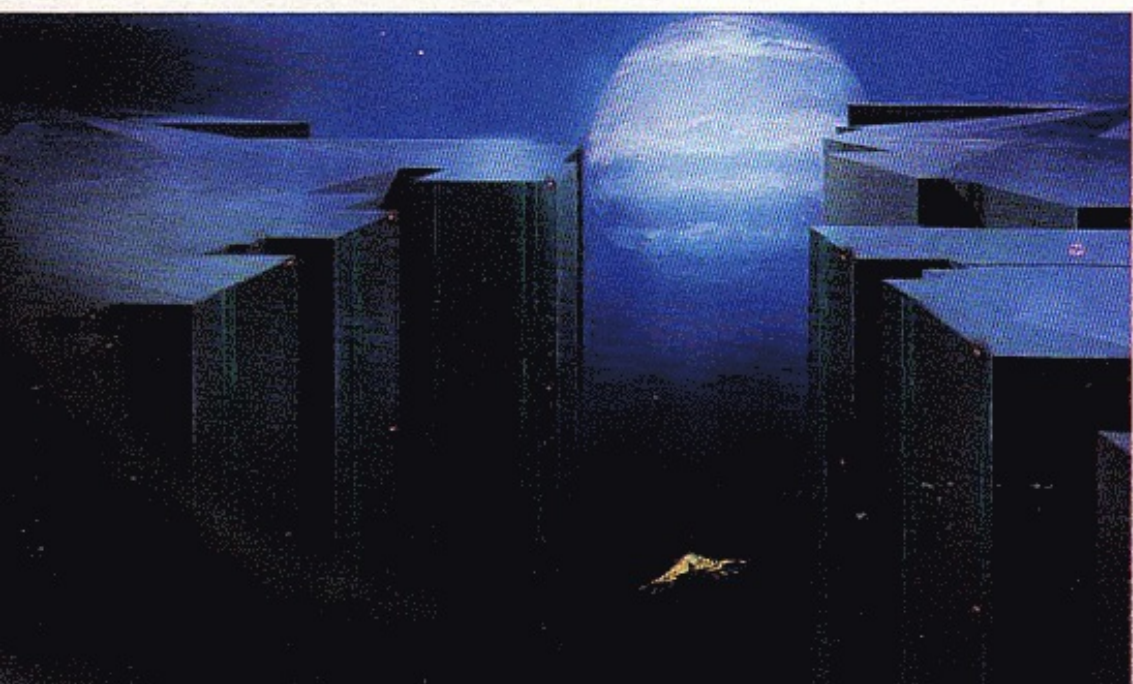
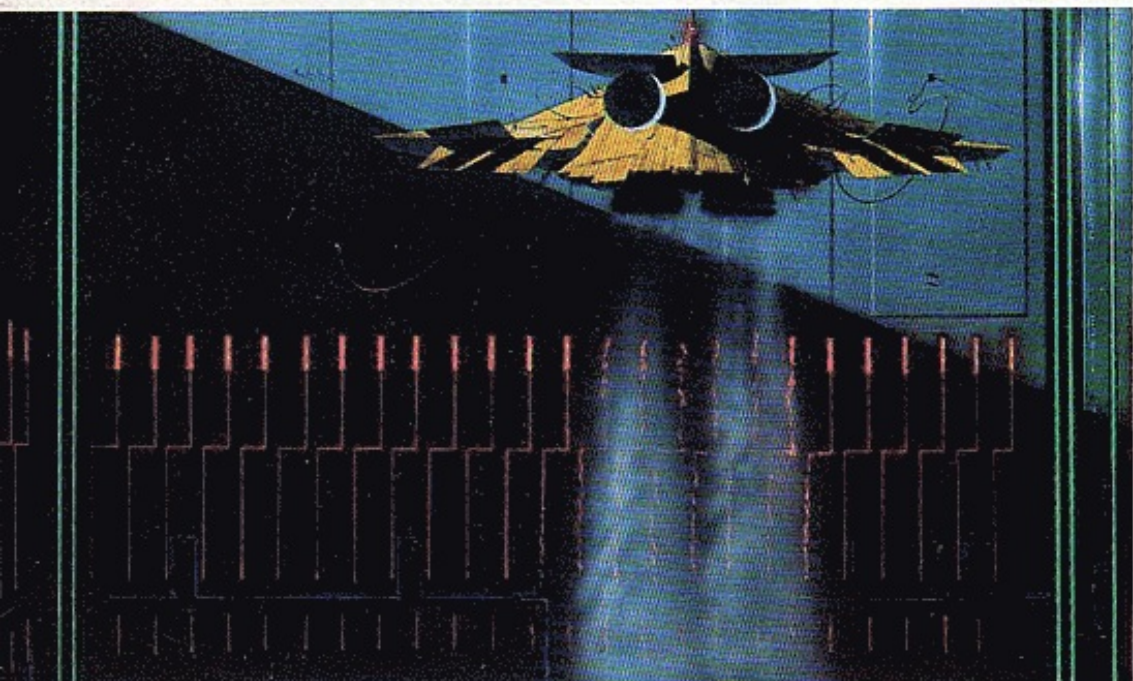
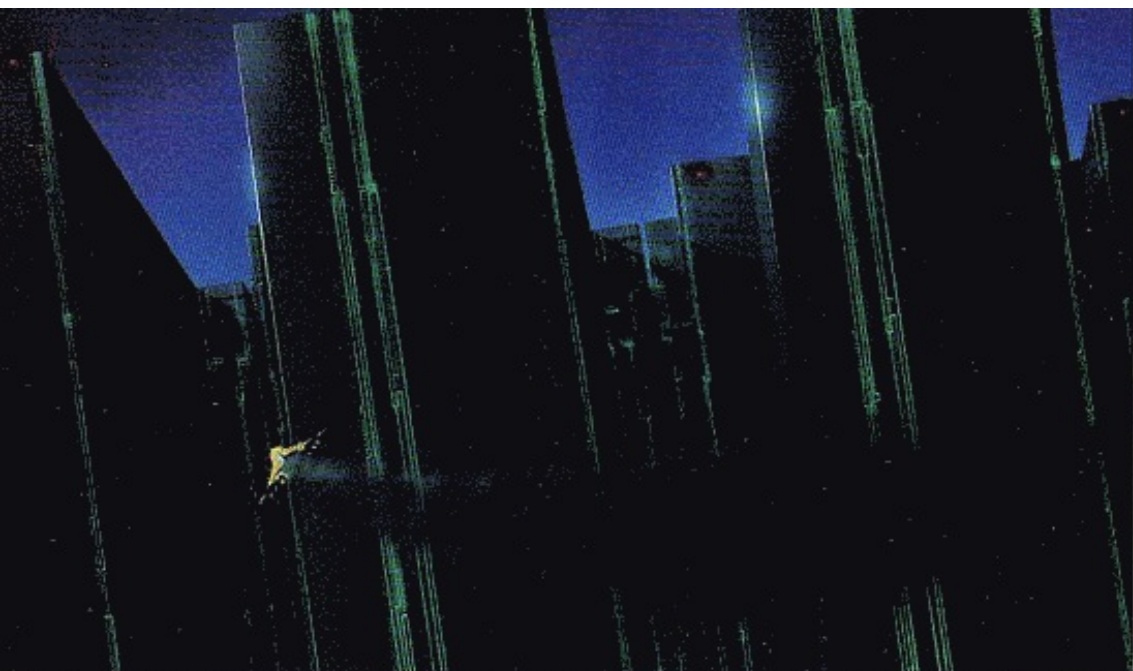
generates enough psychoelectric power to light three cities the size of Cleveland. Between 50 and 100 miracles take place daily in the CGC. A few parsecs away, dominating the barren moon Lii XIV, is the Central Interstellar Penitentiary for Dysfunctional Life Forms. Malefactors from more than 200 different worlds are incarcerated here, some for crimes that we of Earth would consider minor, such as spitting on toadstools, an aggravated felony in the Chang-dong civilization. The penitentiary was built to house 1 million beings in three different atmosphere-temperature configurations. Unfortunately, it now has nearly 4 million, many of them forced to endure incompatible life-support systems. We paused briefly at Loum'a III to see Carnivoron, which, when completed, will be the largest factory in the world for the fabrication of artificial meat products. Only the Italian sausage section is operating today. Next on our list was a visit to the *Albertus Magnus*, the biggest spaceship ever built, now resting in zero gravity above the ocean world of Sargasso IV.

●Some infinities are larger than others. We found GG233 to be a relatively small universe.●

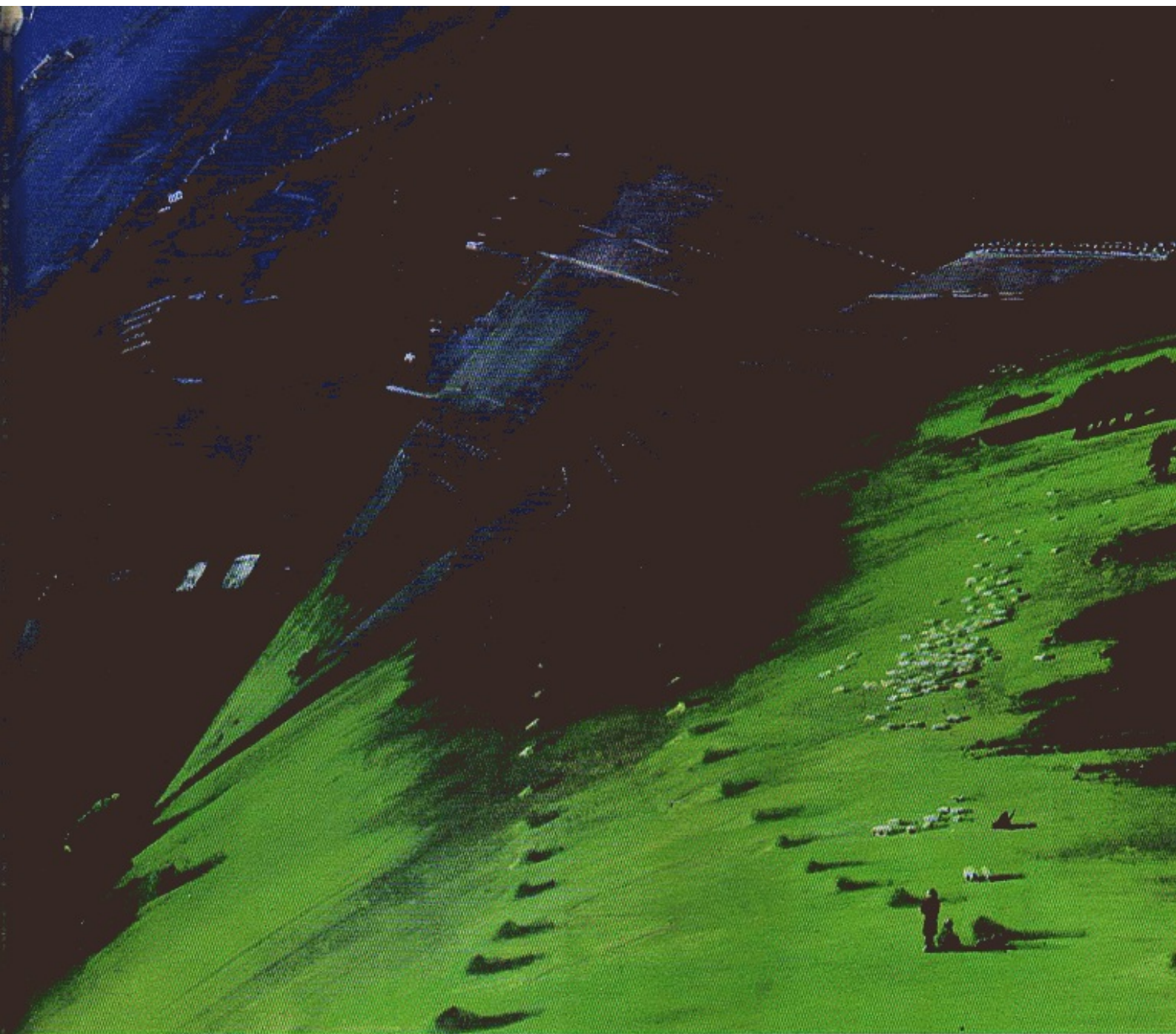


Preceding pages, below:
 Galactic Churches
 building shows miracle
 in progress. Above:
 detail of CGC, with our
 hotel in the foreground.
 Clockwise from above:
 Endeavor breaking out
 of subspace; Central
 Penitentiary cell block;
 artificial meat factory of
 Carnivoron (detail
 showing the immense
 salt and pepper mills);
 below: The Albertus
 Magnus sets off
 fireworks.





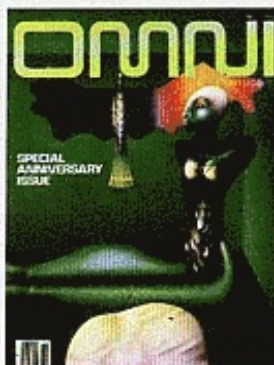
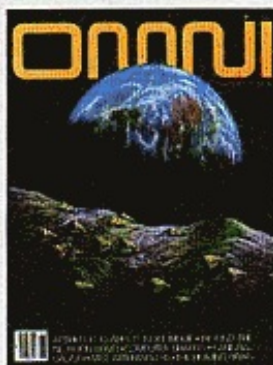
Above, left: view of central memory banks of the Big Computer, near Alcindor II. Middle: Big Computer and XX3 information-hunting module. Below: Big Computer, showing data stacks in "open" mode, with XX3 module below. Above, right: Mega-Ark, showing terrestrial and metallic forms. The herd of grazing sheep is supplied for scale.



Its construction beggared the Sargassians, who have lived in a state of primitive savagery ever since. The *Albertus Magnus* is now used to store grain and potatoes, though there has been some talk of transforming it into a shopping mall. We then flew to the Big Computer, near Alcindor II. Housed within a hollowed-out moon, this computer is capable of solving income-tax problems and performing mortgage calculations for an entire galaxy. An even larger computer is being assembled to verify the results obtained by this one. For our last sojourn we visited the largest artificial world in the galaxy capable of moving on its own power. This is the *Mega-Ark*, which crossed the galactic gulf entirely on autopilot, its crew having perished from acute ennui. The *Mega-Ark* is now in stable orbit around a red dwarf star. It is a popular vacation spot for beings who can breathe its methane atmosphere. ∞

●The Big Computer has enough capacity to project the megagalactic Gross National Product.●

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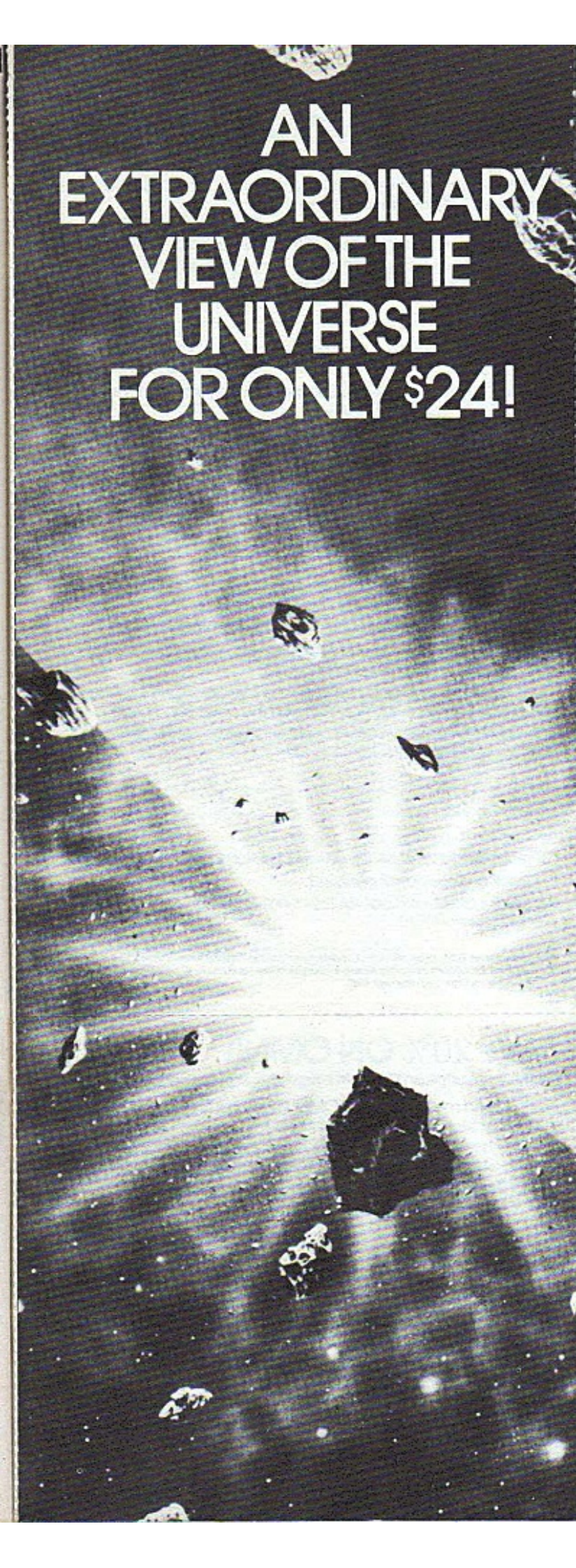
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